Mid-Cycle Self-Evaluation Report

submitted to the
Northwest Commission on Colleges and Universities

by
Lake Washington Institute of Technology
September 2022
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Overview

Introduction
Founded in 1949, Lake Washington Institute of Technology (LWTech) is located just outside Seattle and is the only public institute of technology in the state of Washington. Located in King County, the college is accredited by the Northwest Commission on Colleges and Universities (NWCCU) at both the associate degree level and the baccalaureate level. The college began as Lake Washington Vocational Technical Institute (the Institute), part of the Lake Washington School District (in the K-12 system). From initial instruction in Sewing and Automotive Repair, the Institute grew steadily to include vocational programs in trade and industry, adult education, and community service classes. The current main campus opened in Kirkland in 1983.

In 1991, legislation converted Washington state’s five vocational-technical institutes into technical colleges and integrated them into the Washington State Community and Technical College system. Governance for this system is provided by the State Board for Community and Technical Colleges (SBCTC). During this time, the Institute became Lake Washington Technical College, providing primarily certificates and associate degrees in vocational programs. In 2011, recognizing the expanding nature of workforce pathways, including applied baccalaureates, the Board of Trustees embraced a vision for the college as a technology college (or polytechnic). This vision resulted in the college changing its name to Lake Washington Institute of Technology (LWTech) to better express its offerings. Today, LWTech serves diverse students with a comprehensive curriculum that includes professional-technical programs, applied baccalaureates, basic education for adults, and transfer degrees, with faculty and staff who are dedicated to the workforce mission.

Institutional Updates
Named “Campus Zero”1 by The Chronicle of Higher Education, LWTech was the first college in the country to be directly impacted by COVID-19 on February 29, 2020. There were 21 faculty and students at the Life Care Center of Kirkland (the first medical location in the US with a COVID-19 outbreak) for Nursing and Physical Therapist Assistant clinical rotations and all were exposed to the virus. Since then, LWTech has been at the forefront of innovative, responsive education, successfully operating a technical college through a pandemic.

LWTech received $10,019,928 in Higher Education Emergency Relief Funds (HEERF) to stabilize operations at the college; of these funds, the Department of Education designated $5,743,673 to serve operations with $4,276,255 awarded directly to students in emergency grants.2 The college invested more than $1.85 million of the federal COVID relief funds into Information Technology (IT) infrastructure critical to supporting online operations. An overhaul of the network now allows for stable operations to support hybrid instruction post-pandemic.

In collaboration with Congresswoman Suzan DelBene and Senator Patty Murray, LWTech is also poised to receive over $2.2M in congressionally directed spending, formerly known as earmarks.

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Congresswoman DelBene championed the replacement of aging Early Learning Center (ELC) portables\(^3\) ($1M) and, with an additional $1M from the Washington Department of Commerce, LWTech will open a new childcare center in 2023. The timing of this work is especially meaningful as the committed staff who operate the ELC have remained fully onsite and operational since June 2020; reopening earlier than any other childcare center in the area has been a critical service to our community.

In addition to the new Early Learning Center, LWTech will soon break ground on a new Center for Design on campus featuring classrooms and a community event space. This building is first in line to receive funding from the state in the 2023 biennium with funding arriving on July 1, 2023; the project will ultimately be supported by over $35,000,000 from the state. LWTech is also set to receive a second congressional earmark ($1.2M) in collaboration with Senator Patty Murray to install solar arrays across campus and expand electric vehicle charging at the new building; this process is described in detail in *Moving Forward* on page 26.

Long-time Trustee Darrel Mitsunaga successfully fulfilled two terms on the Board and was replaced by Kirkland resident, John Suk. Mr. Suk serves as the Vice President of the Washington Technology Industry Association.

The college’s executive leadership has remained strong since the NWCCU Year Seven accreditation visit. As Vice President of Administrative Services Bill Thomas retired, he conducted a seamless hand-off to Bruce Riveland. Mr. Riveland, like Mr. Thomas, provides extensive financial management experience in the state’s community and technical college system. Mr. Riveland’s 12+ years of executive experience proved essential to guiding the college through turbulent times during the peak of the pandemic; he also served as the project director for administering the $10M+ in HEERF funds. Vice President of Instruction, Dr. Suzanne Ames began as President of Peninsula College, located in Port Angeles, WA, in July 2022. After a robust national search, the college selected Trần Dăng as the next Vice President of Instruction. Vice President Trần Dăng’s entrepreneurial spirit, experience with High School Programs and English Language Learner populations, and understanding of LWTech from his nearly three years as one of its instructional Deans will allow for a smooth continuation of vital instructional initiatives.

Calls for racial justice touched nearly every aspect of American life and the LWTech community following the deaths of George Floyd\(^4\) and two black teenagers\(^5\) in Seattle in 2020. As a result, LWTech furthered its already strong equity, diversity and inclusion efforts, creating a designated Office of Equity, Diversity, and Inclusion (EDI). This department is staffed by the Executive Director of EDI, Robert Britten, and EDI Coordinator, Brian Crisanto Ramos. In 2021, the Washington State Legislature passed two bills that, in addition to work in progress at LWTech, provided guidance in writing the college’s first formal EDI Strategic Plan; ensuring compliance with these bills guided many efforts of the new Office of EDI. The two bills are described below and LWTech’s EDI Strategic Plan is available in Appendix C.

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• **Senate Bill 5227** – Diversity in Education: This bill established annual diversity, equity and inclusion professional development and learning opportunities for college and university students, faculty, and staff. The bill also establishes regular campus climate assessments and listening and feedback sessions for the college community.

• **Senate Bill 5194** – Equity & Access in Higher Education: This bill implemented a Faculty Diversity program, requirements to post DEI (Diversity, Equity, and Inclusion) definitions on the website, and outreach/peer mentoring for students.

In Summer 2021, Accreditation Liaison Officer duties moved from Dr. Ruby Hayden, Vice President of Student Services, to Dr. Ames, Vice President of Instruction. In Fall 2022, following Dr. Ames’ departure, President Morrison named Elsa Gossett as ALO. Ms. Gossett has more than 15 years of experience in accreditation.

Operations at the college have not – and likely never will – return to the pre-pandemic normal of operating a technical college. In addition to navigating the pandemic, the college also shifted all fundamental business processes from a 1980s software system to LionsLink *powered by ctcLink* (ctcLink), a proprietary CRM software based on PeopleSoft. This move – mandated by the state and occurring during the pandemic – significantly impacted Student Services, Finance, Human Resources, Instruction, Information Technology, and Institutional Research. This change fundamentally impacted all employees and business processes, from which the college is still stabilizing. Despite this, and due to the extraordinary efforts of college staff, LWTech was praised by the State Board for Community and Technical Colleges (SBCTC) for serving as a model college for the preparations and execution of a smooth transition to the new ctcLink system.

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Executive Summary

Mission Fulfillment

LWTech’s mission and core themes reflect its purpose as a workforce training institution. Approved by the Board of Trustees in 2001 and reaffirmed in 2007, 2012, 2018, and 2020, the mission is grounded in equity and the need for resilience and guides our overall direction as a college: “To prepare students for today’s careers and tomorrow’s opportunities.”

Since the NWCCU Year Seven visit in 2019, the college created a 2020-2023 Mission Fulfillment Plan (MFP) that serves as LWTech’s strategic plan (Appendix A). This plan builds upon the SBCTC’s vision of: Leading with racial equity, our colleges maximize student potential and transform lives within a culture of belonging that advances racial, social, and economic justice in service to our diverse communities.  

LWTech embraced this statement by noting, “Lake Washington Institute of Technology (LWTech) is guided by SBCTC’s strategic vision.” The mission, vision, core values and core themes now begin with, “Grounded in equity and the need for resilience...” to highlight the role of equity in planning work and mission fulfillment. Three key revisions in the 2020-23 MFP include: 1) Metric refinement; 2) Adding the equity preamble noted above; and 3) Implementing a comprehensive departmental-level planning process in response to Year Seven Recommendation 3 (Addendum 3, p. 30).

The Board of Trustees approved the MFP on February 8, 2021 (Appendix A) which includes three goals, four core themes, and fifteen metrics supporting mission fulfillment. The Board of Trustees reviewed and discussed the MFP Metrics (Appendix B) at their December 2021 and January 2022 meetings, and receive annual updates. The college community reviewed the metrics at the December 2021 In-Service meeting where Dr. Ames (then VP of Instruction and as the Accreditation Liaison Officer) presented the data. Supervisors led discussions around data alignment with department goals. Executive Cabinet members continued this work in Summer 2022 in preparation for 2022-23 annual plans.

Mission fulfillment is considered achieved when 75% or more metrics are trending positively (yellow and green arrows). As of August 2022, 80% of metrics are trending positively. A MFP summary including data methodology is in Appendix B. Tables 1-7 include goal statement, metric definitions, and data. The years in the tables are: Year 1 – 2020-21; Year 2 – 2021-22; and Year 3 – 2022-23.

Table 1: MFP Goal 1 – Address and dismantle structural racism (Core Themes: Student Achievement, College Community).

<table>
<thead>
<tr>
<th>Table 1 Metric</th>
<th>Target</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Racial Equity Gap in Student Retention</td>
<td>Gap: 0-5%</td>
<td>0%</td>
<td>0% ↑</td>
<td>TBD April 2023</td>
</tr>
<tr>
<td>b) Racial Equity Gap in Employee Retention</td>
<td>Gap: 0-7%</td>
<td>12%</td>
<td>3% ↑</td>
<td>TBD July 2023</td>
</tr>
</tbody>
</table>


9 HU students, as defined by the SBCTC, are Hispanic, American Indian/Alaska Native, Pacific Islander, Black/African American students. The SBCTC and LWTech are aware that language around HU may be shifting to Underrepresented and racially minoritized (URM) people (Blacks/African Americans, Latinxs/Hispanics, and Indigenous), but HU currently align with recent SBCTC data and publications.
Table 2: MFP Goal 2 – Continue implementation of Guided Pathways (Core Themes: Pathways, Student Achievement): c) persistence of all students and d) persistence of HU students compared to non-HU students

<table>
<thead>
<tr>
<th>Table 2 Metric</th>
<th>Target</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>c) Persistence Rate</td>
<td>All: 80-85%</td>
<td>82%</td>
<td>85%</td>
<td>81%</td>
</tr>
<tr>
<td>d) Racial Equity Gap in Persistence Rate</td>
<td>Gap: 0-3%</td>
<td>2%</td>
<td>2%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Table 3: MFP Goal 3 – Position the college as a leader in workforce training for the state’s short-term and long-term economic recovery (Core Themes: Pathways, College Community, External Engagement): e) FTE Enrollment (post-COVID) compared to the state target and f) level of operating reserves relative to the college’s operating budget

<table>
<thead>
<tr>
<th>Table 3 Metric</th>
<th>Target</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>e) Enrollment</td>
<td>Meet state FTE target (3,106 FTE)</td>
<td>2,654</td>
<td>2,501</td>
<td>1,698</td>
</tr>
<tr>
<td>f) Sufficient Operating Reserves</td>
<td>10-15%</td>
<td>15%</td>
<td>15%</td>
<td>21.9%</td>
</tr>
</tbody>
</table>

Table 4: Core Theme Pathways – LWTech is accessible to the community by providing multiple entrance points and educational pathways. The college is a conduit for students to upgrade their skills, transition into new careers, or further their education and training: g) enrollment of HU students compared to LWTech’s service district K-12 schools and h) transition of HU Basic Education for Adult (BEdA) students to college-level courses compared to non-HU students

<table>
<thead>
<tr>
<th>Table 4 Metric</th>
<th>Target</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>g) Racial Equity Gap in College-Level Enrollment</td>
<td>Gap: 0-3%</td>
<td>0%</td>
<td>0%</td>
<td>TBD Late Fall 2023</td>
</tr>
<tr>
<td>h) Racial Equity Gap in Transition Rate to College-Level Enrollment from Basic Education for Adults</td>
<td>Gap: 0-3%</td>
<td>0%</td>
<td>0%</td>
<td>TBD Winter 2023</td>
</tr>
</tbody>
</table>

Table 5: Core Theme – Student Achievement – At LWTech students gain the skills and knowledge needed to achieve their educational goals and to participate in the workforce. i) Completion rates of HU students compared to non-HU students (earning an AAS degree in three years or less) and j) Completion of HU students compared to non-HU students (earning a BAS degree in three years or less)

<table>
<thead>
<tr>
<th>Table 5 Metric</th>
<th>Target</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Racial Equity Gap in Three-year Completion Rate for AAS Students</td>
<td>Gap: 0-3%</td>
<td>9%</td>
<td>12%</td>
<td>TBD Spring 2023</td>
</tr>
<tr>
<td>j) Racial Equity Gap in Three-year Completion Rate for BAS Students</td>
<td>Gap: 0-3%</td>
<td>0%</td>
<td>0%</td>
<td>TBD Spring 2023</td>
</tr>
</tbody>
</table>

Table 6: Core Theme – External Engagement – LWTech forms partnerships with governmental and community organizations, educational institutions, business, and labor in order to effectively support the Institution’s mission: External Engagement is determined by an internal assessment of the college’s external engagement efforts based on the Carnegie Community Engagement Classification model that
partnerships are: k) formed effectively; l) partnerships meet needs of divisions/departments; and m) partnerships support student preparation for the workplace

<table>
<thead>
<tr>
<th>Table 6 Metric</th>
<th>Target</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>k) Partnerships are formed effectively</td>
<td>≥4</td>
<td>Planning.</td>
<td>2.2</td>
<td>Fall 2022</td>
</tr>
<tr>
<td>l) Partnerships meet needs of divisions/ departments</td>
<td>≥4</td>
<td>Planning.</td>
<td>2.7</td>
<td>Fall 2022</td>
</tr>
<tr>
<td>m) Partnerships support student preparation for work</td>
<td>≥4</td>
<td>Planning.</td>
<td>2.2</td>
<td>Fall 2022</td>
</tr>
</tbody>
</table>

Table 7: Core Theme – College Community – LWTech provides a safe, supported and engaging learning environment for students and work environment for faculty and staff: n) employees view the college as an employer of choice and o) HU employees view the college as an employer of choice compared to non-HU employees.

<table>
<thead>
<tr>
<th>Table 7 Metric</th>
<th>Target</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>n) Employee Satisfaction Survey KPI - LWTech is an “Employer of Choice”</td>
<td>All: 75%</td>
<td>85%</td>
<td>78%</td>
<td>78%</td>
</tr>
<tr>
<td>o) Racial Equity Gap in KPI from Employee Satisfaction Survey</td>
<td>Gap: 0-3%</td>
<td>5%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Vision and Core Values
Aligning with LWTech’s mission and core themes, the college has a vision statement and core values. These shape future planning and guide the way employees work together.

Vision: Grounded in equity and the need for resilience, the vision inspires how we see ourselves in the future: To be the college of choice for workforce education.

Core Values: Grounded in equity and the need for resilience, the values give us the tools to implement our mission and vision:

- Inclusive: We intentionally create a welcoming environment where all feel a sense of belonging.
- Innovative: We are leaders in maximizing opportunities to create a thriving college community.
- Collaborative: We are open to change and work together to achieve success for all.
- Respectful: We engage others with acceptance, open-mindedness, courtesy, and care.

Framework for Ongoing Accreditation Efforts
Aligned to the MFP metric reviews and departmental level planning processes, ongoing accreditation framework efforts also include quarterly comprehensive division reviews, annual distribution area outcomes assessments, instructional program reviews every two years, bi-annual College-Wide Learning Outcomes (CWLO) reports, and comprehensive program viability reports. These efforts are explained in more detail throughout this report.
Student Achievement

LWTech assesses student demographics, success, and learning in a variety of ways, including through the analysis of data and assessments of student learning. Together, they create a comprehensive picture of the impact the college is having on students. Much of the data utilized by LWTech to assess student achievement is also used in part to measure Mission Fulfillment, as outlined in the Executive Summary of this report and in Appendix B. Fourteen of the 15 MFP metrics assess student achievement (the other one assesses the college’s operating reserves).

National Comparison Colleges

The college identified five peer community and technical colleges in Washington and Wisconsin with which to compare itself (the full data can also be found in Appendix D):

- Bellingham Technical College (BTC)
- Renton Technical College (RTC)
- Clover Park Technical College (CPTC)
- South Seattle College (SSC)
- Northeast Wisconsin Technical College (NWTC)

The Institutional Planning & Effectiveness Council (IPEC), which includes representation from faculty, Instructional and Student Services administration, Institutional Research, and Human Resources, led this data collection and analysis process. IPEC spent Winter and Spring 2022 quarters identifying the most appropriate peer colleges, collecting the data and developing an effective data visualization format. Data was reviewed by the Instructional and Student Services administration teams in Summer 2022. In Fall 2022, the data will be shared widely throughout the college beginning at Fall In-Service. Data will be used to inform department-level planning led by Executive Cabinet members (see Appendix I for Annual Departmental Level Planning template). Data is available on the LWTech Data Page.10

The comparison indicators are described below with data collected annually, and include:

- Enrollment Target
- Fall-to-Fall Retention, and
- Graduation Rate

% of Target Enrollments

Measure: Percent of target Full Time Equivalent (FTE) enrollments as monitored by SBCTC Enrollment and Allocation monitoring reports.

Rationale for Inclusion: Like many institutions of higher education across the country, LWTech’s enrollments were negatively impacted by the onset of COVID-19. However, because of LWTech’s unique role as “Campus Zero” in February 2020, enrollment impacts from the pandemic were experienced earlier than other colleges in the nation. By including this metric for academic years both pre- and post-pandemic, LWTech can monitor both the initial and long-term enrollment impacts, as well as how enrollment recovery compares to other colleges post-pandemic.

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10 Full url: [www.lwtech.edu/data](http://www.lwtech.edu/data)
Methodology: LWTech obtained this information from SBCTC Allocation Monitoring Reports. State data is retrieved from SBCTC Annual Reports. LWTech attempted to obtain NWTC targets through email correspondence with NWTC on April 28, 2022 and May 5, 2022. (*For Seattle Colleges, enrollment targets are reported as district totals.)

What the Data Tells Us: While enrollment was negatively impacted at all comparison colleges by the onset of COVID-19, enrollment targets continued to decline in the second year of the pandemic. Despite these decreases, LWTech remains above the average of its state peers in fulfilling its enrollment targets.

What LWTech has Done or Will Do: The immediate shift to remote operation on Thursday, March 5, 2020 (one week after the first COVID-19 cases in faculty and students) reflects the “can-do” spirit of LWTech noted in Commendation 1 from the most recent Year Seven accreditation visit. To date, in support of enrollment, the college continues offering online, hybrid, and hyflex formats and fully established an Office of Engagement & Learning with grant funding from the Department of Education. The college also shifted marketing and outreach strategies, as well as ensured all student supports were offered virtually (including orientations and open houses) and in-person (advising, residency determinations, student life activities, tutoring, financial aid support, and placement).

<table>
<thead>
<tr>
<th></th>
<th>LWTech</th>
<th>BTC</th>
<th>RTC</th>
<th>CPTC</th>
<th>SSC</th>
<th>Average of State Peers*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-18</td>
<td>97%</td>
<td>98%</td>
<td>99%</td>
<td>93%</td>
<td>92%</td>
<td>98%</td>
</tr>
<tr>
<td>2018-19</td>
<td>94%</td>
<td>90%</td>
<td>88%</td>
<td>93%</td>
<td>88%</td>
<td>90%</td>
</tr>
<tr>
<td>2019-20</td>
<td>85%</td>
<td>83%</td>
<td>79%</td>
<td>87%</td>
<td>83%</td>
<td>83%</td>
</tr>
<tr>
<td>2020-21</td>
<td>81%</td>
<td>76%</td>
<td>72%</td>
<td>71%</td>
<td>75%</td>
<td>76%</td>
</tr>
</tbody>
</table>

*This information is not shown for NWTC as we were unable to identify a comparable target from them.

Figure 1: Percent of Target FTE Enrollments

Retention

Measure: Fall-to-Fall Enrollment disaggregated by enrollment status (Full-Time and Part-Time) for First-Time, Degree-Seeking Students. This metric uses the IPEDS definition of retention, which counts a student beginning in Fall that remains enrolled for credit in that same institution the following Fall.

Rationale for Inclusion: As part of mission fulfillment, LWTech strives to prepare students for successful careers through valuable degree and certificate offerings. To complete a credential that is meaningful in the workplace, students must persist for multiple quarters. This measure serves as an early indicator for on-time completion, and signals whether action should be taken to improve student performance and/or engagement in their academic program(s).

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12 The commendation reads as follows: “Effectively transforming the institution into a mission-driven, high-functioning system, as manifested through strong leadership support from the Board of Trustees, along with the president and other administrators, and the “can do” attitude of faculty and staff.” The full letter from NWCCU is available at: www.lwtech.edu/accreditation

13 LWTech defines these different instructional modalities as 1) Online – synchronous and/or asynchronous online; 2) Hybrid – synchronous face-to-face and asynchronous online, and 3) Hyflex- students are given choice in how they participate in the course, where choices may include a combination of synchronous face-to-face, synchronous online, and asynchronous online learning.
Methodology: LWTech obtained this information from annual IPEDS reports for first-time, degree-seeking students for LWTech and each of its comparison colleges. This data was then disaggregated by student enrollment status (e.g., part-time or full-time) with the understanding that Fall-to-Fall retention rates may differ between these two groups.

What the data tells us: LWTech’s Fall-to-Fall retention rates tend to be higher for students enrolled full-time over those that attend part-time. Despite being above average compared to Washington peer colleges, the range of LWTech’s Fall-to-Fall retention rates (40% to 59% for part-time; 51% to 62% for full-time) over the past four years shows a need for targeted efforts to improve student retention.

What LWTech has Done or Will Do: In response to these data points, LWTech collected more data through surveys to better understand why students withdraw. For example, in a 2020 survey, 56% of students noted mental health as one of their top concerns, and the college used these results for successful grant applications. With grant funding, LWTech was then able to hire a full-time mental health counselor to support students in the pandemic and beyond. While at the beginning of the pandemic Student Support Services, including advising, financial aid, and tutoring, moved entirely online, at this time all services are offered in a hybrid fashion to ensure students may access services in the method that meets their preferences and availability.

Figure 2: Fall-to-Fall retention rates for first-time, full-time degree-seeking students
Graduation

**Measure:** This metric uses the IPEDS definition of graduation rate (GR), which tracks the number of students entering the institution as full-time, first-time, degree/certificate-seeking undergraduate students in a particular year (cohort), by race/ethnicity and gender; and the number completing their program within 150 percent of normal time to completion.

**Rationale for Inclusion:** Student achievement is a core theme for LWTech in support of MFP Goal 2, which states, “Continue implementation of Guided Pathways.” Guided Pathways is a series of academic and student supports (e.g., case-managed advising and program maps) that collectively aim to increase the rate at which a student earns a degree or certificate. Graduation rates track this progress.

**Methodology:** For each year, LWTech identifies a cohort of first-time-in-college, degree- or certificate-seeking students who were enrolled full-time and tracks their progress. LWTech then downloads this data annually from the IPEDS website and compiles it locally for year-by-year comparisons.

**What the Data Tells Us:** While the average graduation rate for Washington peer colleges is similar to those of the national comparison college (NWTC), LWTech graduation rates among first-time, full-time award-seeking students show a need for improvement.

**What LWTech has Done or Will Do:** LWTech noted limitations in using the IPEDS definitions and launched Tableau Community Dashboards to provide more expansive data for internal decision making, including assessment of graduation rates for broad student groups. These dashboards are also used in the annual program review process. In Student Services, advisors incorporate program Career Pathway charts into student advising. Work related to improving graduation rates continues; for example, in 2022-23, LWTech is connecting a third-party degree planning software to the new ctcLink system to help students stay on their pathway to graduation.
Figure 4: Graduation rates of full-time, first-time, degree/certificate-seeking undergraduates within 150% of normal time to program completion

Disaggregated student data
Historically, the college published some student achievement metrics on its website but lacked a comprehensive public portal for disaggregated data. The use of disaggregated student data began with the Office of Instruction using disaggregated student data as part of its revitalized Program Review process in 2017. This data is hosted on a secure website and users require a password and short training to access the site. LWTech received a commendation in the 2019 report related to the campus’ “[… ] commitment to close opportunity gaps among its students by developing and implementing a comprehensive equity, diversity, and inclusion plan.”\(^{14}\) The work to close opportunity gaps began with the use of disaggregated student data to identify areas of focus and track metrics and the new Program Review process served as the launching point for work to date.

To expand upon the successful use of disaggregated data on campus, the Institutional Planning & Effectiveness Council worked in partnership with the Institutional Research Office in Spring 2022 to collect and review the data presented below, which is posted on the college website. In Summer 2022, the Instructional Administration and Student Services teams reviewed rationale for what disaggregated data points are posted on the LWTech Data Page and how the data fits within Mission Fulfillment, National Comparisons, and Disaggregated Student Data.

Overview
For disaggregated data, the college applied the following demographic filters to identify opportunities for, and measure progress toward, equitable improvement of student success:

- Race/ethnicity,
- HU/Non-HU,
- Gender,
- Age group, and
- Need-based aid recipients

A representative sample of LWTech’s data-driven planning processes are shown starting on page 12 along with action steps. A sample from each demographic category is shown; however, this is not

\(^{14}\) The full letter from NWCCU is available at: www.lwtech.edu/accreditation
inclusive of all demographic disaggregation within the data, nor a complete list of all data-driven activities. All metrics are shown in Appendix E and on the Research & Data Page in dashboard form.

The specific indicators for student success include:

- Enrollment,
- Persistence,
- Retention,
- Graduation rate, and
- Post-college employment outcomes

The college reviewed five disaggregated student indicators while only three are presented for national comparison. This additional review allows for more nuanced decision making as we are not limited by what other institutions broadly share. Enrollment for disaggregated parallels enrollment targets but persistence and post-college employment outcomes are stand-alone internal data items.

The following is an analysis conducted by the college that shows alignment with the national comparisons where applicable and, as needed, describes the difference between the two data points. The analyses also provide additional details on data-driven work to support equity at LWTech.

**Enrollment**

**Measure:** Annual, unduplicated headcount of students. *The metric sample for demographic disaggregation for Enrollment is race/ethnicity.*

**Rationale for Inclusion:** While similar to the national comparison of full-time equivalent (FTE) students (Figure 1, page 8), this metric shows student headcount in academic years both pre- and post-pandemic. Reviewing headcount – as opposed to FTE – allows LWTech to see the number of individuals in each demographic category, as opposed to calculating the number of credits.

**How Metric Differs from National Comparison:** This metric looks at headcount instead of full-time equivalent students (FTEs).

**Methodology:** Each quarter, the State Board for Community and Technical Colleges (SBCTC) publishes quarterly and annual enrollments, which is available to the public. LWTech publishes this annually on the Research & Data Page.

**What the Data Tells Us:** The data shows that LWTech is predominantly white, though students of color at LWTech do enroll at a higher rate than in the college’s district high schools (page 5, metric g of MFP). Given the number of tribes in Washington State – 29 federally-recognized tribes and three who offer a long history of representation in Washington\(^\text{15}\) – the low number of Native American or American Indian students at the college is concerning. Additionally, the number of Hispanic students has fallen consistently over the years.

**What LWTech has Done or Will Do:** LWTech hired dual-language staff members (Spanish-speaking) to provide student support services such as Financial Aid and Advising. Physical consolidation of the Essential Skills Office (which offers English Language Learner classes) within the Student Services area aims to improve the transition of these students, especially Hispanic or Latinx students, to college-level

courses. The Office of Equity, Diversity and Inclusion is leading outreach efforts to regional tribes. This includes reviewing our institutional land acknowledgment with three regional tribes, exploring ways to provide education to our campus community on Coast Salish nations, and to gain feedback, in collaboration with a team from LWTech, on ways to move beyond our land acknowledgment.

![Figure 5: Annual enrollment (headcount) disaggregated by race](image)

**Persistence**

**Measure:** Quarter-to-quarter enrollment of first-time, award-seeking students which tracks first-time entering students in fall quarter (or summer continuing to fall) that indicates if an eligible student enrolled or completed a program in the following quarter (quarter to quarter persistence). *The metric sample for demographic disaggregation for Persistence is HU vs Non-HU.*

**Rationale for Inclusion:** As noted in national comparisons, LWTech strives to prepare students for successful careers through valuable degree and certificate offerings. To complete a credential that is meaningful in the workplace, a student must often attend for multiple years. However, in 2021-22, LWTech offered 58 short-term certificates (ranging from 19-44 credits and can be completed in one to three quarters) that must be registered with the SBCTC and whose “documentation of need may include, but is not limited to, advisory committee meeting minutes, notes of conversations or emails from local employers, labor/market data, or notes from meetings with economic and/or workforce development organizations.”\(^\text{16}\) With students able to earn a short-term credential, LWTech decided to include quarter-to-quarter persistence as an internal measure for review.

**How Metric Differs from National Comparison:** This metric looks at quarter-to-quarter persistence; this data point is not available from IPEDS. This data point does not include applied baccalaureate students, while four-year students are included in IPEDS.

**Methodology:** Each quarter, the State Board for Community and Technical Colleges (SBCTC) publishes the First-Time Entering Cohort (FTEC) dashboard (available only on college campuses) and this data is

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available for download by colleges. LWTech uses this information to create internal data dashboards to improve the user experience and publishes this on the Research & Data Page. This dataset excludes international students, apprenticeship and applied baccalaureate students.

**What the Data Tells Us:** As shown in Figure 6, HU students (non-Asian students of color) persisted at a lower rate than Non-HU students (White and Asian) during the pandemic.

**What LWTech has Done or Will Do:** In response to HU students leaving the college at a higher rate than Non-HU students, LWTech expanded student support services identified as high priorities by HU students in recent surveys. For example, in a 2020 COVID Survey, HU students reported access to campus resources (tutoring, library, counseling, etc.) as a top pandemic-related concern; this was of virtually no concern for Non-HU; and, compared to Non-HU, more HU students planned to access mental health counseling. In response to survey feedback, LWTech secured grant funding for a full-time mental health counselor and moved all support services online, with virtual options planned for future years.

![Figure 6: Fall-to-Winter persistence rates for first-time, award-seeking students at LWTech, also includes a small cohort of students starting in Summer and persisting until Fall](image)

**Retention**

**Measure:** Fall-to-Fall enrollment of first-time, award-seeking students from Fall-to-Fall quarter that indicates if an eligible student enrolled or completed a program in the following quarter (quarter to quarter persistence). *The metric sample for demographic disaggregation for Enrollment is Gender.*

**Rationale for Inclusion:** *Same as national comparison.* As part of mission fulfillment, LWTech strives to prepare students for successful careers through valuable degree and certificate offerings. To complete a credential that is meaningful in the workplace, students must persist for multiple quarters. This measure serves as an early indicator for on-time completion, and signals whether action should be taken to improve student performance and/or engagement in their academic program(s).

**How Metric Differs from National Comparison:** This metric includes both full- and part-time students while IPEDS tracks and publishes retention data for full- and part-time students separately.

**Methodology:** Each quarter, the State Board for Community and Technical Colleges (SBCTC) publishes the First-Time Entering Cohort (FTEC) dashboard (available only on college campuses) and this data is available for download by colleges. LWTech uses this information to create internal data dashboards to
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improve the user experience and publishes this on the Research & Data Page. This dataset excludes international students, apprenticeship and applied baccalaureate students.

**What the Data Tells Us:** Historically, the retention rate of female or female-identifying students varied (Figure 7). The college expected the rate to be higher than that of male students due to the higher overall completion rates for females or female-identifying (Appendix E). However, the college hypothesizes this overall trend is due to the high enrollments of females in selective admission, high-paying programs such as nursing or dental hygiene; in these programs, completion rates average 95-100%. The college noted that, during the pandemic, female students were less likely to return to campus the following fall.

**What LWTech has Done or Will Do:** To support all students, the Foundation started an emergency fund program in 2017-18 with a donor matching challenge of $50,000. In 2019, following the passage of 2SHB 1893 during the 2019 legislative session, LWTech successfully applied for pilot funding from the state to support students with $100,000 in state funding for basic emergencies. While available to all students, research shows that most applicants have been female (64%). Additionally, with the distribution of student aid funds under HEERF, female or female-identifying students received 65% of emergency grants in 2021. While internal analyses and broader research findings are underway, LWTech hopes that these awards lessened the impact of the pandemic on those most severely affected (noted as women and persons of color\(^{17}\)) and that these awards will help students return this fall.

![Figure 7: Fall-to-Fall retention rates for first-time, award-seeking students at LWTech by gender](image)

**Graduation Rate**

**Measure:** Identifies students who completed, earning any award at LWTech in a given period (shown below at the four-year time frame. The metric sample for demographic disaggregation for Enrollment is Age.

**Rationale for Inclusion:** *Same as national comparisons.* Student achievement is a core theme for LWTech in support of MFP Goal 2, which states, “Continue implementation of Guided Pathways.”\(^{17}\) Guided Pathways is a series of academic and student supports (e.g., case-managed advising and program

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maps) that collectively aim to increase the rate at which a student earns a degree or certificate. Graduation rates track this progress.

**How Metric Differs from National Comparison:** This metric looks at a four-year completion rate (200%); IPEDS tracks and publishes more widely three year completions (150%).

**Methodology:** Each quarter, the State Board for Community and Technical Colleges (SBCTC) publishes the First-Time Entering Cohort (FTEC) dashboard (available only on college campuses) and this data is available for download by colleges. LWTech uses this information to create internal data dashboards to improve the user experience and publishes this on the Research & Data Page. This dataset excludes international students, apprenticeship and applied baccalaureate students.

**What the Data Tells Us:** Despite retention rates that exceed other groups, students 19 and under complete at a lower rate than other age groups, even when adding an additional year for completion (Figure 8; 200% time or four years). The same trend is present for the three-year completion rate (Appendix E). The average age of an LWTech student is 31 years old and the range of students means LWTech serves students in a large age range and those students have different learning preferences. For example, older students may be more suited to hands-on training at a technical college as research shows older (non-traditional) students who do not enroll directly from high school are focused on learning goals.\(^{18}\); this outcome-based style of learning is well suited to hands-on, technical training where skills are mastered in the classroom alongside contextualized general education requirements.

**What LWTech has Done or Will Do:** LWTech offers a “traditional” dual enrollment program (called Running Start) and LWTech also houses the Lake Washington Technical Academy (LWTA), a high school accredited by the Northwest Association of Schools and Colleges and recognized by the Office of Superintendent of Public Instruction (OSPI). LWTech recently received $1M in funding to support young students earning an associate degree alongside a high school diploma. With this funding, students will receive free summer tuition, have access to an online college preparation course, and no longer need English 101 as a pre-requisite for dual enrollment status. This work launched in Summer 2022 so results are not yet known but LWTech expects to see increases in student completions.

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[https://doi.org/10.1023/A:1024944429347](https://doi.org/10.1023/A:1024944429347)
Post-College Employment Outcomes

Measure: Identifies student employment status as well as median earnings in the four years following first quarter of enrollment at LWTech, regardless of completion status. Reflects whether a student is found in records for Unemployment Insurance (UI)-covered jobs or a postsecondary educational institution outside of the community and technical college (CTC) system. The metric sample for demographic disaggregation for Enrollment is Received Need-Based Aid.

Rationale for Inclusion: The mission of LWTech is “to prepare students for today’s careers and tomorrow’s opportunities” and students consider future wages when choosing their educational pathway.

How Metric Differs from National Comparison: Employment outcomes are not published in IPEDS making this a unique, Washington-specific metric.

Methodology: Each quarter, the State Board for Community and Technical Colleges (SBCTC) publishes the First-Time Entering Cohort (FTEC) dashboard (available only on college campuses) and this data is available for download by colleges. LWTech uses this information to create internal data dashboards to improve the user experience and publishes this on the Research & Data Page. This dataset excludes international students, apprenticeship and applied baccalaureate students. The employment data is from a data-sharing agreement between the community and technical colleges and the Washington State Employment Security Department (ESD).

What the Data Tells Us: LWTech data shows that students who receive need-based aid (e.g. Pell grants) have slightly higher employment rates but pursue careers with lower median earnings.

What LWTech has Done or Will Do: A recent research report from the SBCTC notes that “earnings inequality begins with a graduate’s first credential” and that “certificates at least one year in length offer the highest entry employment earnings difference.” The SBCTC also published that completion of college-level math in a student’s first year increases the likelihood of completion.19 While LWTech does

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19 State Board for Community and Technical Colleges. (2020, May). Two-Year Colleges Must Become Singularly-Focused on Graduating Students with Degrees that Combine Academics and Skills (No. 20–3). 
offer short certificates, the college addresses these limiting factors (the necessity of completing college-level math and earning only a short certificate) through intentional, student-focused work. This includes improving math pathways through Guided Self-Placement (see page 24) and the creation of a flipped math classroom for non-STEM majors who make up 70% of LWTech students. In the flipped classroom, students view the lectures online and attend class to discuss problem sets and to work with the instructor. To encourage completion of longer degrees, LWTech offers internal transfer pathways to bachelor of applied science and, in Fall 2023, will launch the college’s first Bachelor of Science degree. LWTech offers the second-most applied baccalaureate degrees in Washington and is second only to Bellevue College, whose enrollment is 4x greater than that of LWTech.

![Figure 9: Four-year employment rate and earning for first-time, award-seeking students that earned a degree/certificate at LWTech](image)

Next Steps
In Fall 2022, the data will be shared widely throughout the college beginning at Fall In-Service. Data will be used to inform department-level planning led by Executive Cabinet members (Appendix I – Annual Department Level Planning Template).
Student Learning Assessment
LWTech faculty design, revise, and participate in regular assessment of student learning. This includes three core processes: College-Wide Learning Outcomes (CWLOs) Reporting, completion of the Program Outcomes Guide (POG), and annual Program Review. The purpose of assessment is to provide an honest and accurate look at:

- where our students fully meet our learning expectations,
- where we identify room for improvements, and
- what strategies we will use to improve student learning.

![Diagram showing connections among the three learning assessment processes at LWTech and their connection to course outcomes and feedback loop.]

**College-Wide Learning Outcomes** - This link goes to a repository of all CWLO reports, with the full URL provided as a footnote.²⁰

College-Wide Learning Outcomes (CWLOs) are embedded in at least one course for every certificate of proficiency and embedded in at least two courses for every degree. In Fall 2020, after an extensive review by a team of faculty, Instructional Council approved a name change from Global Outcomes to College-Wide Learning Outcomes, and significantly revised the previous CWLO Intercultural Appreciation

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to Cultural Humility. The other four CWLOs are communication, critical thinking, information literacy, and teamwork.

The teaching and reporting process can be described as follows:

- **What:** The reporting process includes qualitative and quantitative analysis of students’ learning of the CWLOs. Faculty complete a unique report for each outcome. The report includes a description of how the CWLO was taught; the summative assessment used; student achievement based on a standardized, faculty-developed rubric; faculty reflection and plans for continuous improvement; and students’ descriptions of their learning.

- **When:** Faculty teaching CWLO-designated courses teach to and assess the outcome every time the course is taught. They complete the formal report bi-annually. LWTech has consistently assessed CWLOs for over a decade.

- **Who:** Faculty, both full-time and adjunct, complete the reporting process when teaching the designated courses and following the schedule above of bi-annual work. Students also participate in the CWLO reporting process by completing a self-reflection that includes:
  - Based on the definition of [the CWLO] provided above and the learning experiences you had in this class, how does the ability to [summary of the CWLO definition] relate to your professional goals? How will you apply the ability to [summary of the CWLO definition] to your personal experiences?

- **How:** The following are examples of how teaching to the CWLOs has changed based on faculty analysis in the reporting process. These changes are summarized from the comments in the faculty reflection section of the reporting packets over the past five years.
  - **Critical Thinking:** In ACCT& 201 Principles of Accounting II, students complete an assignment determining if a company should issue bonds or stock. The faculty member noted that in future classes, he would provide more time for the students to complete the assignment and more fully demonstrate their learning. Since the previous time he taught the course, he added collaborative work to the assignment, encouraging students to check their ideas with other students and talk through their thinking and the differences in their work.
  
  - **Information Literacy:** A faculty member who taught ECED& 107 Health, Safety, and Nutrition reflected, “I was more focused this quarter on including the global outcome [CWLO] than in past quarters and spent more time reviewing information literacy than before. I do think that as the students have not taken English 101 at LWTech and because we have such a high number of students who speak/read/write English as a second language, I tried to be more aware of [and respond to] the challenges they face in completing research-based assignments.”

  - **Cultural Humility (previously Intercultural Appreciation):** In PSYC& 220 Abnormal Psychology, the faculty member adjusted her assignment to better align with the standardized Intercultural Appreciation rubric. She also embedded intercultural appreciation concepts throughout the course and assessed the outcome on several assignments in addition to the summative assignment. The result was that students had more fully developed responses than in the past.

In the process of revising the Intercultural Appreciation outcome and creating resources for both faculty and students related to Cultural Humility, the college developed a new framework for supporting the teaching and assessment of CWLOs. This framework includes a Canvas training on the CWLO itself and on teaching to and assessing it. It also provides faculty with standardized student self-assessments to administer before and after teaching to the outcome. Faculty are better supported in CWLO-related
work through enrollment in a Canvas course that includes those items, along with sample lesson plans, course materials, and digital submission of their reports.

A student employee with an educational background in Cultural Humility reviewed the training in summer 2022. The Dean of Instruction, Basic and General Education piloted the training at the college’s annual faculty Summer Institute in September 2022. The full resource will be utilized for the first time in Fall 2022, with revisions and sample lesson plans from faculty who participated in the Summer Institute. If the new framework is successful in better supporting faculty and assessing student learning, it will be applied to all CWLOs. The Cultural Humility Canvas course can be accessed online by the public using this link.

During the pandemic, reporting on CWLOs was on hiatus (teaching to the CWLOs continued), allowing for the development of the new framework. In the spring of 2022, the Dean of Instruction, Basic and General Education surveyed faculty about the next outcome for redevelopment – teamwork. Overwhelmingly, faculty supported the ongoing teaching and assessment of teamwork as one of LWTECH’s CWLOs. The survey revealed that many faculty from across departments assign group work, while only some overtly teach how to work effectively in teams. The survey results support the application of the new framework described above to all CWLOs.

Program Outcomes - This link goes to a repository of all Program Outcomes Guides, with the full URL provided as a footnote.21

Program Outcomes are the overall abilities students demonstrate upon completion of a program (i.e., long certificate or degree). The program outcomes are listed in the college catalog and each course’s outcomes align with the program outcomes.

- **What:** The Program Outcomes Guide (POG) provides a framework for quantitative and qualitative analysis of students’ learning of the program outcomes. Emphasis is placed on the qualitative description of student learning results and on the changes made or planned to improve results. One guide, which includes identification of measurable criteria for each outcome, course mapping, type of assessment, timing of assessment, results, and changes made or planned, is completed by each program.
- **When:** Faculty complete a POG every two years.
- **Who:** POGs are completed by all full-time faculty within a program; adjunct faculty are involved as they have capacity within each program.
- **How:** The following are examples of how teaching to Program Outcomes has changed based on faculty analysis in the reporting process. These changes are summarized from the comments in the faculty reflection of the reporting packets over the past four years.
  - **Business Technology:** The Business Technology program identified the need to provide additional course options to cover new, expected skills in data analysis and Power BI. This will better prepare students to meet the program outcome, “Carry out office administration procedures and management support using office technology.” Faculty also cited the use of transparent assignment design in the capstone course as contributing to increased performance of students’ skills as professional communicators and workers.
  - **Computer Security and Network Technology:** In the Computer Security and Network Technology program, students “create and troubleshoot physical networks.”

21 Full URL: https://lwtech.instructure.com/courses/1831789/pages/completed-program-outcomes-guides-by-year?module_item_id=36302603
2019, students were given more access to online network simulators to practice the labs that are performed on real equipment in the classroom. Since that time, this access has been supplemented by opportunities to check out lab equipment for projects. Students now have full remote access to the physical networks beginning in their 4th quarter of the program. As a result, students in 2021-2022 demonstrated more successful achievement of the program outcome compared to previous cohorts.

- **Public Health:** The BAS in Public Health program identified a structural change that will help to improve student learning related to multiple program outcomes. The current course sequence unintentionally created a very challenging first quarter. In future years, BIOL 311 Infectious and Chronic Diseases of Public Health Importance will be taught later in the program, allowing for more balance in content demands.

**General Education Distribution Area Outcomes**

While LWTech thought it had a comprehensive way to assess student learning outcomes in general education courses through Program Outcome assessment, the NWCCU Year Seven visit identified some structural challenges. As a result, the faculty created a specific assessment model for gen eds. It is described fully in the Addendum, Recommendation 2 on page 30.
Programmatic Assessment

The institution must provide programmatic assessment of at least two programs as evidence of a continuous process of improvement. The programs should be broadly representative of institutional efforts (and as a result programs that are approved by a CHEA-recognized programmatic accreditor are discouraged for this report).

LWTech has two comprehensive ways to assess programs of study and instill a continuous improvement process: 1) Program Review and 2) Program Viability

**Program Review** – This link goes to a repository of all Program Reviews, with the full URL provided as a footnote.\(^{22}\)

Program Review provides the opportunity to assess student access to, and success in, each instructional program and general education distribution area. Faculty and deans also look at overall needs of the program to improve indirect measures of student learning, such as enrollment and completion. In 2017-18, Program Review underwent extensive revision to move to a data-driven assessment process that is both meaningful and manageable. The tool gets revised each cycle to streamline the data and achieve meaningful and manageable analysis; recent updates in 2020 include moving from multiple dashboards to a singular spot for data review. The new format allows faculty to analyze their program enrollment, persistence, and completion through an equity lens by disaggregating student success by students of color and white students. The Dean and Vice President of Instruction assess each faculty’s written program review. The information below describes the Program Review process:

- **What:** Program Reviews include a quantitative analysis of enrollment, retention, completion, and equity between white students and students of color. Gen Ed Distribution Area Reviews include enrollment, quarterly passing, quarterly average grades, quarterly withdrawals, and equity between white students and students of color. Position requests and equipment requests from faculty are also made as part of Program Review. Faculty access data through Tableau, for which they receive training and individual access.
- **When:** Program Review used to be completed annually. Based on faculty input, Program Review changed to every two years, effective 2020.
- **Who:** Faculty department chairs and program directors complete Program Review with input from all department faculty and, as applicable, prof-tech advisory committees. Basic Education for Adults programs are currently developing a Program Review template to supplement their required state and federal reporting and to align with Program and General Education Review.
- **How:** The following are examples of how Program Review informed instructional changes to programs. These changes are summarized from the comments in the faculty reflection of the reporting packets over the past five years.
  - **Addition of full-time faculty:** In Fall 2021, faculty identified a need for additional full-time professors in 12 programs. Instructional administrators ranked the programs in order of priority based on a variety of needs including faculty to student ratio, historical growth in enrollment, and number of current full-time faculty. Funding was identified within Instruction for 9 of the 12 positions, which were published in a national search in Winter 2022 and selected for a Fall 2022 start.
  - **Action to address declining enrollments:** The Occupational Therapy Assistant review identified a steady decline in enrollment and retention. The faculty created an OTA 100

\(^{22}\) Full URL: [https://lwtech.instructure.com/courses/1831789/pages/completed-program-reviews-by-year?module_item_id=36302605](https://lwtech.instructure.com/courses/1831789/pages/completed-program-reviews-by-year?module_item_id=36302605)
class to better prepare incoming students with knowledge about kinesiology and insight into the OTA career. Enrollment for OTA 100 in its first quarter – Summer 2022 – was very strong.

- **Success in enrollments**: The Funeral Service Education Program is seeing steady enrollment growth, which is a relatively recent trend. Faculty and staff in the department evaluated previous data and implemented a variety of recruitment and retention strategies including raising awareness locally and nationally and implementing proven retention strategies such as The Four Connections.

- **Adjustments to graduation process**: The Auto Collision Program data showed a lower than expected number of certificate of proficiency completers. The Department Chair worked with Student Services to auto-award the certificates, which ensures students receive the credentials they have earned.

- **Continued support of revised math placement**: Guided self-placement and alternative placement options have increased the number of students placing into college-level math (fewer taking remedial courses). To continue flexible and appropriate placement options during the pandemic, the placement process was moved online.

**Program Viability**

The Vice President of Instruction has authority to form, as needed, a Program Viability Taskforce to review college programs for closure or major revision. The need for a Program Viability Taskforce is determined by the following factors.

- Low enrollment
- Low faculty-to-student ratios
- Misalignment with industry standards
- Inadequate industry supply and demand gap
- Minimal career opportunities for graduates
- Financially inefficient program

The Taskforce includes the following membership:

- Program Department Chair or Director
- Program Faculty
- Division Dean
- Dean of Instruction who supervises Curriculum Development
- President of the Union or designee
- Faculty Peer from Division
- Advisory Committee Chair (or other member)
- Others determined by the Vice President of Instruction
- Advisory Committee Chair (or other member)
- Others determined by the Vice President of Instruction

In the past two years, six programs underwent comprehensive program viability review: 1) Fitness Specialist/Personal Trainer; 2) Culinary Arts; 3) Machining Technology; 4) Electronics Technology; 5) Laser & Optical Technology; and 6) Mechanical Design Technology (Appendix F). Results from these reviews vary from program closure to curriculum revision and results of the most recent Program Viability Taskforces include:
• **Fitness Specialist/Personal Trainer**: Program viability led to the closure of the Fitness Specialist program due to extremely low enrollment with four students left in the program. The program was closed after those students graduated. The greatest total enrollment the program ever had was 19 students in 2017, and most years the enrollment was far less. While students gained employment, they did not necessarily need a credential to do so. Prior to program viability, the Office of Instruction supported the Fitness Specialist program with numerous attempts to update the curriculum, without success.

• **Culinary Arts**: Program viability analysis concluded that this program was hit particularly hard during the pandemic due to drastic changes in the industry. While enrollment has struggled over the years, students gain employment after graduation. The program modified its structure and curriculum to separate from the Baking Arts program, which was embedded in Culinary Arts. This allows the students to pursue a more defined guided pathway and provides more predictability in their program completion. Enrollment has regained some strength since the Program Viability process.

• **Machining Technology**: Program viability analysis confirmed this program had been affected by the pandemic and a significant decrease in hiring by Boeing. Through the analysis, instructional administrators supported the faculty in redesigning the curriculum to serve entry-level students as well as incumbents looking to upgrade their skills. The program recruited enough students to start a cohort in Fall 2021.

• **Laser and Optical Technology**: Program viability analysis led to the closure of the Laser and Optical Technology Program due to extremely low enrollment. At the time of closure, no current students were currently enrolled in the program. While there was industry support for equipment and curriculum development, there was not corresponding interest from potential students.

• **Electronics Technology**: Program viability led to the closure of the Electronics Technology program due to extremely low enrollment. Last year, the program did not run a new cohort, and all students enrolled have graduated. While some interest remained, enrollment did not reach the necessary level to open a new cohort for 2022-2023, and the program was discontinued.

• **Mechanical Design Technology**: After undergoing program viability, the analysis concluded that the program had been affected by the pandemic and efforts to increase marketing were successful, with 10 students enrolled as of early September. With enrollment surges customary in later September, the program will likely enroll a full or close-to-full cohort in Fall 2022.
Moving Forward

The intentional end of the current Mission Fulfillment Plan (MFP) in 2023 positions LWTech to launch a new, three-year plan to coincide with the Year Seven visit. LWTech’s well-established and robust planning process will use surveys, on-campus focus groups, and all-staff meetings in addition to building upon annual department-level plans. The planning process at LWTech offers stability to the campus as it has proven successful over many years, even in a remote environment.

This work will formally begin in Fall 2022 but, in preparation, the Institutional Planning & Effectiveness Council interviewed executive leadership and campus community members to identify planned focus areas within the current MFP. These innovative and aspirational steps will guide the planning process for the next three years. This will streamline next year’s work while keeping in place the college’s definition of and structures around mission fulfillment, student achievement, and programmatic assessment. As aligned with the current plan, the following college goals will influence future planning, provide stability, and prioritize campus well-being.

Goal 1: Address and dismantle structural racism
The newly-established Office of Equity, Diversity and Inclusion will ensure an equity focus in annual department-level plans and the college will offer intentional and focused professional development to identify structural racism within the college and work toward removing it; for example, in 2022-23, the college’s opening in-service session will be based on *Healing the Colonized Mind: A Path to Personal Decolonization* by Dr. Gerry Ebalaroza and Jeremy Tunnell. Beginning in 2023, faculty will, in collaboration with the Office of Research & Grants, assess the effectiveness of the new required classes in Diversity and Social Justice (DSJ) on closing equity gaps. The new DSJ requirement will be reviewed alongside the addition of Cultural Humility to the College-Wide Learning Outcomes.

Other future Office of EDI work in Fall 2022 is centered around restructuring and reorganizing the college’s Equity, Diversity, and Inclusion Council (EDIC), which serves as part of the college’s shared governance system. This restructure will align future Council subcommittee work with the college’s MFP goals and EDI Strategic Plan priorities. For example, EDI Strategic Plan Goal 1 is the establishment and continuous updating of standardized and widely shared terms and definitions to create a common language of equity at LWTech (Appendix C). These shared definitions ground the equity work on campus and provide opportunities to create accountability and transparency as the college continues to dismantle systemic racism.

The college also plans to conduct climate assessments every two years which will coincide with the Washington state legislative mandate to provide updated EDI strategic plans to the SBCTC bi-annually. The next climate assessment will run in 2023 and will inform the work on LWTech’s future Mission Fulfillment Plan. These climate assessments are incredibly useful tools to evaluate effectiveness in identifying and addressing structural barriers to becoming an anti-racist college.

LWTech continues to prioritize recruitment and retention of faculty and staff that represent our student body, and the recruitment and retention of students from historically underrepresented communities. Efforts to increase recruitment and retention for employees include college departments partnering to recruit from diverse communities and streamlining our hiring practices by creating standardized templates and procedures, as well as including EDI representatives on hiring committees. Departments are also partnering to establish community-based relationships to increase student recruitment, support, and retention. Most recently, the Office of EDI was able to connect with El Centro Cultural Mexicano in Kirkland, which resulted in immediate referral of two potential students and a developing
pathway between an underserved community and the college. Partnerships such as this are foundational to increasing LWTECH’s presence in diverse communities, and to providing opportunities for feedback and accountability with the college’s students, staff, and faculty.

**Goal 2: Continue implementation of Guided Pathways**

Guided Pathways, which is an equity-focused redesign of student pathways and support services, builds upon four key pillars: 1) clarifying paths to student education and career goals; 2) helping students get on a path; 3) keeping students on path; and, 4) ensuring students are learning across programs. Work to date includes student supports online and curriculum redesign. The college will also improve advising and enrollment monitoring by connecting a third-party degree planning software to the new ctcLink system.

Student supports that moved online due to the pandemic will continue to offer a virtual format in addition to in-person service to allow additional flexibility. This includes Guided Self-Placement, which places students in math or English. The college uses an Open Educational Resource platform for math and, for English assessment, faculty score essay samples. This eliminates high-stakes testing from the process. The college uses a Collaborative Advising process that begins with new student orientation followed by a meeting with a Student Success Navigator who creates a first quarter plan and refers students to support services and faculty for longer-term program guidance. Due to the pandemic, these services also moved online, and online advising will remain an option alongside in-person appointments.

LWTECH also connects general education requirements to technical courses in student cohorts (e.g. students in Automotive take a contextualized math class meeting graduation requirements with other Automotive students). Many LWTECH students had negative prior experiences in math or English; by connecting this work to technical courses, students can find their first successes in academic classes.

In future years, the college will reassess and improve its collaborative advising model and enrollment monitoring processes. LWTECH will implement a new third-party degree planning software to “keep students on their path.” This software will notify advisors when a student takes a class off their pathway and trigger an advising appointment. The college will also revisit its Strategic Enrollment Management (SEM) processes. A cross-division team, co-led by the Vice Presidents of Student Services and Instruction starting in Fall 2022, will re-envision development and growth of instructional programs.

Finally, Guided Pathways necessitates the use of data to assess interventions. The required move to ctcLink means the college no longer must maintain two separate databases to access student data for assessment purposes. Users – both students and staff – can now access self-services systems on campus for routine items such as scheduling courses, providing address changes, and updating personal information. These greater efficiencies will allow LWTECH to devote resources once used for manual data entry to support student pathways.

**Goal 3: Position the college as a leader in workforce training for the state’s short-term and long-term economic recovery**

The evolution of LWTECH – from a K-12 vocational training school to the state’s only public institute of technology – offers a long history of innovation and adaptation from which the college can support post-pandemic workforce trainings. Future highlights range from continued improvements in internal planning to large-scale construction projects that support creating a more climate-resilient campus.

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In preparation for the Year Seven visit, the college will continue department-level plan implementation by sharing division strategies across departments and, ultimately, feeding those steps into both the new Mission Fulfillment Plan and/or the EDI Strategic Plan. These plans (as noted in Appendix I) tie directly to the college’s budget process. This integrated planning creates stability for the college’s budget and budget reserves exceed the Board policy expectation that operating reserves be “sufficient” (historically benchmarked at 15%). The current state of the college is strong from a fiscal perspective with operating reserves at 21.9%. Enrollment trends in the 2022-23 academic year will inform future planning.

The campus is also preparing for major capital projects beginning in 2023, including the new Early Learning Center and construction of the Center for Design. These new capital projects further enhance the campus where recent projects have included updates and creation of new science laboratory spaces, installation of state-of-the-art kitchen equipment, and a full-scale remodel of the dental hygiene clinic, providing significant opportunities to increase enrollment in high-demand, high-wage programs. Community access remains paramount for campus: LWTech will continue offering services to public such as the dental clinic and restaurant along with the new community event space.

Furthermore, future projects will bring climate resiliency to the forefront of campus construction. In August 2022, Senator Patty Murray’s office notified LWTech that the college is poised to receive $1.2M to install solar arrays across campus alongside new Electric Vehicle chargers on campus. This means the college’s new building, The Center for Design, will not only offer new classrooms and learning spaces but also feature a solar-powered community event space and community chargers for electric vehicles; these savings will support equipment needs for clean energy programs in development (e.g. electric vehicle maintenance). Students will also be able to train on the new solar grids.

As we move forward in preparation for the institution’s seven-year accreditation review in Fall 2026, we will continue to utilize continuous improvement strategies and mission fulfillment metrics, “[t]o prepare students for today’s careers and tomorrow’s opportunities.”
Addendums
Responses to topics previously requested by the Commission.

Status of Outstanding Recommendations

Recommendation 1: The Evaluation Committee recommends that College establish a technology replacement plan in support of planning and resource allocation for institutional operations, programs and services. (2.G.8)

An IT Replacement Plan, completed in Spring and Summer 2022, sets the college on a predictable path of assessing needs to keep pace with changing technology. This plan built upon years of work, bringing together disparate IT planning processes and powering the seismic shift in instructional modalities exemplified by the hyflex learning environments now offered to students as a result of the college’s status as Campus Zero at the forefront of the COVID pandemic. Following the college’s Year Seven evaluation and continuing through the pandemic, the college invested more than $1.85 million, upgrading the college’s back-end network structure to stabilize IT infrastructure and support significant online operations.

- **What:** Information Technology Services (ITS) developed a prioritized technology replacement plan which utilizes: 1) regular budget allocations; 2) revenue from the new Student Success fee; and, 3) revenue from an increase to the Campus Comprehensive Fee. The long-term replacement plan works alongside the IT Strategic Plan (Appendices G and H) and develops priorities for ongoing upgrades and needed stabilizations.

- **When:** On April 11, 2022, the Board of Trustees made a significant step toward establishing a predictable, fully resourced technology replacement plan by voting to approve a new Student Success fee charged to students based on their credit load. Students in the following programs are not affected by this proposal: Basic Education for Adults, High School Programs, Apprenticeships, and Parent Education.

This fee will begin in Fall 2023 with a total increase of $5 per credit, which will cost the average student an additional $48.50 per quarter. The college anticipates the new Student Success Fee will raise $400,000 annually. This will be used to upgrade faculty computers and laptops, technology in classrooms such as projectors and touch screens, and updates to faculty classroom workstations. Students eligible for financial aid will have this increased cost covered in their aid package as part of the cost of instruction.

Along with the new Student Success Fee, the Board also approved a $1 increase to the Campus Comprehensive Fee, which is specifically designed to provide ongoing funding to upgrade and replace staff workstations and laptops. This added fee raises approximately $65,000 annually for these needed upgrades (a total of $6 increased fees across both increases).

In addition to these regular and ongoing funding streams, the long-established Student Tech Fee raises approximately $275,000 annually and has, in past years, supported shared IT resources on campus such as Wi-Fi, kiosks, and open computers. While not a dedicated source of funding, the college’s long-standing partnership with students to accomplish shared technology priorities underpins the reliability of the student fee partnership.

- **Who:** ITS, Administrative Services, Executive Cabinet, and students; essentially, the entire campus is supporting this work.
How: The new post-COVID instructional model relies heavily on hybrid pedagogy. This requires a stable network to support student learning. The $1.85 million investment in modernizing the college infrastructure has directly supported the college’s Mission Fulfillment goals. Upgrades in Wi-Fi connectivity, equipment, and expansion to the loaner laptop and tablet programs dramatically and directly increased equitable access for students. Up-to-date software and infrastructure assist with Guided Pathways implementation and success by connecting new CRM software with the ongoing efforts of the college’s degree-planning software and simplifying the college navigation experience for students. Additionally, both the currently modernized equipment and robust future IT planning position the college to serve workforce students as they train in the new economy.

The technology replacement plan includes scheduled ongoing replacement of high-level technology for student classrooms, and regular ongoing workstation replacements for faculty, staff and students informed by department needs and workstation age and capability. The plan is designed such that the lowest 20% of end-point equipment will be replaced every year, resulting in 100% end-point equipment replacement over a five-year rotating schedule. In concert with the dedicated funding for network and IT infrastructure replacements and upgrades in ten-year intervals, the ITS department is well placed to support the college’s mission fulfillment goals by providing needed technological equipment and support.

As the current newly installed network system ages over the next ten years, the ITS department is preparing for future expenses by allocating funds that will be put directly toward upgraded server rooms, new network switches, internet bandwidth necessary for hyflex learning, and the related licenses. Of particular focus will be data security on campus; the college estimates $100,000 annually is needed to maintain network security. This is especially timely given high-profile college closures due to network breaches and ransoming of data. LWTech is particularly concerned about security as the insurance industry is increasingly reluctant to insure against ransomware attacks.

The college believes it has completely fulfilled the expectations of this NWCCU recommendation and is on solid ground in being able to consistently maintain high quality technology hardware and services to students and employees.

Recommendation 2: The evaluation committee recommends the institution fully implement the system of program assessment to evaluate achievement of all established general education learning outcomes as appropriate for the various certificate and degree pathways. (4.A.2, 4.A.3, 4.B.2)

Faculty, Deans of Instruction, and the Vice President of Instruction viewed this recommendation as an opportunity to look more holistically at general education assessment. This process started with a name change from Program Outcomes Assessment to Distribution Area Outcomes Assessment. This language is significant for LWTech as it reflects the college’s work in transforming program offerings. Significant updates include several transfer degrees and the college’s Guided Pathways work to deliberately embed general education courses into technical programs.

In addition to more accurately naming the assessment process, faculty from each distribution area reviewed and refined the general education distribution area outcomes. The revised outcomes are included in the college’s catalog and are now integrated into the following assessment process:
• **What:** Students and faculty both complete assessments. *Students* first rate their learning on a numerical scale and respond to open-ended questions to assess which assignments and topics contributed most to their learning of the outcome; students also provide feedback on what could be improved. Beginning in Fall 2022, the self-assessment will be included in the college’s regular class evaluation form. A sample self-assessment can be viewed in [Microsoft Forms](https://forms.microsoft.com). Faculty complete an assessment that captures their sense of how students are performing on each applicable distribution area outcome.

• **When:** Faculty meet annually to review the assessment data provided above. Next year, students will assess these outcomes quarterly.

• **Who:** All faculty who teach classes in a distribution area use the same rubric to evaluate either a summative assignment or a representative collection of assignments from across the class. The evaluation is not graded or shared with the students; it is shared with the department chair and used to improve teaching to the outcomes (and to guide revision of the outcomes themselves when determined necessary by distribution area faculty).

• **How:** Faculty identify trends in student learning and improvements to be made to future teaching. This process was implemented for the first time in Spring 2022. Reports are available [online](https://www.lwt.edu). Student learning outcomes assessment – while student focused – is essential to fulfilling the mission of LWTech. Without specific learning opportunities, students will not be able to progress, graduate and enter the workplace.

The following are examples of how the initial distribution area outcomes assessment informed instructional changes.

- **Written Communication:** English faculty, who teach to the Written Communication distribution area outcomes, identified required, short meetings with either the instructor or a tutor throughout the quarter as helpful to “reluctant help seekers” whose self-assessments and faculty evaluations showed room for additional growth, as well as the desire for it.

- **Natural Science:** Natural Science faculty discussed the need to overtly use and explain scientific language in class to better help students connect their learning to the overall distribution area outcomes and be able to transfer that understanding to future classes. They also used student feedback to revise the outcomes and ensure they are truly the core learning in all Natural Science classes.

- **Quantitative Reasoning:** Math faculty, who teach to the Quantitative Reasoning distribution area outcomes, responded to students’ positive comments about discussion boards and team assignments by planning 2022-2023 training opportunities for all faculty in these methods.

The college believes it has completely fulfilled the expectations of this NWCCU recommendation. Based on the first round of assessments conducted in Spring 2022, the faculty and instructional administrators are confident they have developed a model that tracks student learning and success in achieving the distribution area learning outcomes. Importantly, the model facilitates robust discussion of teaching and learning, as well as ongoing improvements to both those and the model itself.

Executive Cabinet developed a comprehensive planning process shortly after the 2019 NWCCU Year Seven visit; this work began with a focused retreat dedicated to department-level planning led by an external consultant. Efforts stalled due to the pandemic but regained traction in Summer 2020 and Executive Cabinet developed the first Department-Level Planning Template (Appendix I) to create a process that is meaningful and manageable. Using a template ensures similar structure across divisions, a strong connection to mission fulfillment, and that departments across the college understand each other’s processes. The template also makes it easier for others in the college community to digest the information.

Each Cabinet member used this template as they led planning sessions with their teams in the process described below:

Process for 2020-21

- **What:** Executive Cabinet members drafted the first annual plans in Fall 2020 and shared with one another in Winter 2020. The Institutional Planning & Effectiveness Council reviewed each plan in Summer 2021 to ensure end of the year assessments demonstrated closure in goal assessment.

- **When:** Work occurred in Fall 2020 and Spring 2020 and Summer 2020

- **Who:** Executive Cabinet and the Institutional Planning & Effectiveness Council

- **How:** The Institutional Planning & Effectiveness Council reviewed each plan in Summer 2021 to ensure end of the year assessments demonstrated closure in goal assessment. Due to the late start, resource allocation could not be directly tied to prior planning during the first round of the new planning process. Furthermore, individual departments struggled to fully complete each form; only 42% of departments completed both Part I and II. Each department-level plan crosswalks department goals to the overall MFP and is key to overall mission fulfillment as it operationalizes day-to-day work within overall progress toward mission fulfillment. While this process was launched in 2020-21, LWTech views these results not as a failure but as evidence of progress since this baseline year.

Despite this, the college implemented non-financial results from planning including:

- The design and implementation of a part-time faculty budget managed by deans with financial transparency and support from the VP of Administrative Services
- Economic Recovery Consortium created to increase visibility in the community
- Improved New Student Orientation to include targeted information about paying for college and accessing emergency support
- Implementation of software Formstack which dramatically reduced workload in multiple student services offices in response to concerns from students about wait times and paperwork burdens
- Consolidation of Student Services and Instructional support services to students that are now housed in one location (Essential Skills with the Assessment Center in the West building and TRIO, the Learning Lab, and Supplemental Instruction in the Tech building)
Process in 2021-22

- **What:** In Summer 2021, Executive Cabinet members created comprehensive plans for the 2021-22 cycle. In Fall 2021, the President reviewed each plan with the team. Executive Cabinet members worked with their divisions quarterly to track progress toward achieving the plan’s goals. In March 2022 Executive Cabinet members presented budget requests to the Budget Council based on resource needs identified through the planning process and 100% of all departments completed both parts of the planning process. Furthermore, in 2021-22, the Budget Council implemented a voting system to increase rater reliability and ensure council members vote in the broadest possible interest of the college. Inter-rater reliability “provides a way of quantifying the degree of agreement between two or more coders who make independent ratings about the features of a set of subjects,” in this case, scoring of budget requests.24 While it has limitations in stand-alone research, it is effective in this case as it adds a layer of training in a model that does not use any statistical analyses. On February 9, 2022, the Finance and Budget Council approved the following priorities for ranking budget requests:
  - FTE generation,
  - Retention - Reducing student turnover,
  - Feeding growth areas, and
  - Any other metric that is germane to the purpose or output of the organizational unit making the budget request.

Examples of resource allocation informed by the 2022 planning process included:
  - Instruction re-allocated funds to pay Diversity & Social Justice faculty to participate in the Faculty Learning Community
  - Student Services identified a way to reallocate grant funds to support the division’s top request of more staffing in the Career Services office.

- **When:** Work occurred on schedule in 2021-22 in Fall, Spring and Summer.
- **Who:** Executive Cabinet and the Institutional Planning & Effectiveness Council
- **How:** The 2021-22 department-level plans fully met the intentions of year one; Executive Cabinet members prioritized this work, completed it in a timely manner, and details from department-level plans directly led to the development of MFP metrics. This cohesive process means that LWTech’s MFP assessment is streamlined, cross-departmental and easily accessible to the campus and wider community. As an example, the matrix and document is 1/10 the size of the previous accreditation tracking system and decreased from 50+ pages to 5 pages.

Planned changes in 2022-23

- **What:** LWTech’s planning processes and alignment with mission fulfillment are now broadly embedded across campus and widely shared. The final update to this much-improved and useful process is moving from a Word form to a Formstack document (in process). Content edits added to simplify this work include:
  - Pre-populating budget requests to ensure department plans fully inform budget priorities
  - Cross-embedding EDI Strategic Plan goals throughout every department plan

- **When:** Executive Cabinet approved the new template concept on August 31, 2022 and work on the new instructions and template design in Formstack is currently under way and scheduled for completion in late September 2022.

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• **Who:** The new ALO Elsa Gossett, Executive Cabinet, and the Institutional Planning & Effectiveness Council led the revision of the template and associated work. This team will implement the improved process just prior to the start of Fall 2022.

• **How:** While results from this improved process are not yet available, the college believes this year will fully institutionalize department-level plans within the Mission Fulfillment plan by connecting budget requests (successful or not) to other changes made in support of department and college-wide goals. The culmination of iterative updates from Executive Cabinet – paired with widespread sharing of the work – fully connects day-to-day operations for all to overall mission fulfillment.

The college believes it has extensively, if not completely, fulfilled the expectations of this NWCCU recommendation. The substantial progress to date delivers a strong body of evidence showing transformational change in aligning department-level planning with mission fulfillment and resource allocation.
Appendices

Appendix A: Mission Fulfillment Plan
Appendix B: Mission Fulfillment Metrics
Appendix C: LWTech EDI Strategic Plan
Appendix D: Student Achievement Charts (Peer colleges’ comparison)
Appendix E: Student Achievement Charts (LWTech disaggregation)
Appendix F: Program Viability Reports
Appendix G: ITS Strategic Plan
Appendix H: ITS Replacement Plan
Appendix I: Annual Department Level Planning Template
Mission Fulfillment Plan 2020-2023

**Strategic Vision** In partnership with the Washington State Board for Community and Technical Colleges (SBCTC), Lake Washington Institute of Technology (LWTech) is guided by SBCTC’s strategic vision:

*Leading with racial equity, our colleges maximize student potential and transform lives within a culture of belonging that advances racial, social, and economic justice in service to our diverse communities.*

**Mission** Grounded in equity and the need for resilience, the mission guides our overall direction as a college:

To prepare students for today’s careers and tomorrow’s opportunities

**Vision** Grounded in equity and the need for resilience, the vision inspires how we see ourselves in the future:

To be the college of choice for workforce education

**Core Values** Grounded in equity and the need for resilience, the values give us the tools to implement our mission and vision:

- **Inclusive:** We intentionally create a welcoming environment where all feel a sense of belonging.
- **Innovative:** We are leaders in maximizing opportunities to create a thriving college community.
- **Collaborative:** We are open to change and work together to achieve success for all.
- **Respectful:** We engage others with acceptance, open-mindedness, courtesy, and care.

**Core Themes** Grounded in equity and the need for resilience, the core themes are the pillars supporting the mission and provide long term objectives (7 years aligned with accreditation review cycles) for the college:

- **Pathways:** LWTech is accessible to the community by providing multiple entrance points and educational pathways. The college is a conduit for students to upgrade their skills, transition into new careers, or further their education and training.
- **Student Achievement:** At LWTech, students gain the skills and knowledge needed to achieve their educational goals and to participate in the workforce.
- **External Engagement:** LWTech forms partnerships with governmental and community organizations, educational institutions, business, and labor in order to effectively support the Institution’s mission.
- **College Community:** LWTech provides a safe, supported and engaging learning environment for students and work environment for faculty and staff.

**Mission Fulfillment Planning Goals** Grounded in equity and the need for resilience, the planning goals are the short term (3-4 years), action focused goals aligned with the Core Themes (formerly called strategic planning goals):

- **Goal 1:** Address and dismantle structural racism (CT: Student Achievement, College Community)
- **Goal 2:** Continue implementation of Guided Pathways (CT: Pathways, Student Achievement)
- **Goal 3:** Position the college as a leader in workforce training for the state’s short-term and long-term economic recovery (CT: Pathways, College Community, External Engagement)
Mission Fulfillment Plan – Proposed Metrics
August 2022

Summary

Fifteen metrics are proposed for tracking mission fulfillment. Mission fulfillment for LWTech is defined by the college’s Institutional Planning and Effectiveness Council (IPEC) as showing 75% or more metrics trending positively (yellow and green arrows).\(^1\) Mission Fulfillment Plan (otherwise known as a strategic plan) metrics are shown in Tables 1-3 (page 2) and Core Theme metrics are shown in Tables 4-7 (page 4 and 5). \textit{Citations for all data are in Appendix A beginning on Page 6.}

IPEC considered the following accreditation standards in developing mission fulfillment metrics:

- **1.B.2** The institution sets and articulates meaningful goals, objectives, and indicators of its goals to define mission fulfillment and to improve its effectiveness in the context of and in comparison with regional and national peer institutions.

The Mission Fulfillment Plan goals are:

- **Goal 1:** Address and dismantle structural racism (\textit{Core Themes: Student Achievement, College Community})
- **Goal 2:** Continue implementation of Guided Pathways (\textit{Core Themes: Pathways, Student Achievement})
- **Goal 3:** Position the college as a leader in workforce training for the state’s short-term and long-term economic recovery (\textit{Core Themes: Pathways, College Community, External Engagement})

\textbf{Key for all Mission Fulfillment and Core Theme tables:}

\begin{tabular}{|c|c|}
\hline
Meet target: & • HU is short for historically underrepresented students of color (American Indian, Black/African American, Hispanic, and Pacific Islander) \\
Trending toward target: & • Gap: Percent difference between HU individuals and Non-HU individuals when Non-HU values are greater than HU values. If HU values are greater than Non-HU values, then Gap = 0%.

Below target: & • \textit{Note:} For the green, yellow and red arrows, the color and direction of the arrow indicate progress toward mission fulfillment targets regardless of whether the target is aiming to grow a metric or close a gap.

\hline
\end{tabular}

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\(^1\) Please see Appendix A for information on how targets were set when there are ranges.
## Appendix B: Mission Fulfillment Metrics

### Table 1: Assessment of Goal 1 – Address and dismantle structural racism.

<table>
<thead>
<tr>
<th></th>
<th>Baseline: Fall 2018 to Fall 2019</th>
<th>3-Year Target</th>
<th>Year 1: Fall 2019 - Fall 2020</th>
<th>Year 2: Fall 2020 - Fall 2021</th>
<th>Year 3: Fall 2021 - Fall 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Racial Equity Gap in Student Retention</td>
<td>HU: 51% Non-HU: 56% Gap: 5%</td>
<td>Gap: 0-5%</td>
<td>HU: 58% Non-HU: 57% Gap: 0%</td>
<td>HU: 55% Non-HU: 54% Gap: 0%</td>
<td>Gap: TED (April 2023) ---</td>
</tr>
<tr>
<td>Fall-to-Fall retention rate*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 2: Assessment of Goal 2 – Continue implementation of Guided Pathways.

<table>
<thead>
<tr>
<th></th>
<th>Baseline: Fall 2018 to Winter 2019</th>
<th>3-Year Target</th>
<th>Year 1: Fall 2019-Winter 2020</th>
<th>Year 2: Fall 2020-Winter 2021</th>
<th>Year 3: Fall 2021-Winter 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Persistence Rate</td>
<td>All: 83%</td>
<td>All: 80-85%</td>
<td>All: 82%</td>
<td>All: 85%</td>
<td>All: 81%</td>
</tr>
<tr>
<td>1st to 2nd Quarter Persistence**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Racial Equity Gap in Persistence Rate</td>
<td>HU: 83% Non-HU: 83% Gap: 0%</td>
<td>Gap: 0-3%</td>
<td>HU: 80% Non-HU: 82% Gap: 2%</td>
<td>HU: 83% Non-HU: 85% Gap: 2%</td>
<td>HU: 76% Non-HU: 83% Gap: 7%</td>
</tr>
</tbody>
</table>

### Table 3: Assessment of Goal 3 – Position LW Tech as the integral leader in workforce retraining as Washington State prepares for short and long-term economic recovery.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Enrollment</td>
<td>LWTech enrollment post-COVID (FTE)</td>
<td>2,925</td>
<td>Meet state FTE target (3,106 FTE)</td>
<td>2,654</td>
<td>2,501</td>
</tr>
<tr>
<td>b) Sufficient operating reserves</td>
<td>% operating reserves relative to the college’s operating budget</td>
<td>13%</td>
<td>10 -15 %</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Core Theme Assessment

Nine metrics are proposed for tracking assessment of core themes. In conjunction with the metrics described in Tables 1-3, core theme metrics are combined to assess mission fulfillment.

The Core Themes at LWTech are:

- **Pathways**: LWTech is accessible to the community by providing multiple entrance points and educational pathways. The college is a conduit for students to upgrade their skills, transition into new careers, or further their education and training.
  - This is assessed in Table 4 (Enrollment)
- **Student Achievement**: At LWTech, students gain the skills and knowledge needed to achieve their educational goals and to participate in the workforce.
  - This is assessed in Table 5 (Completion)
- **External Engagement**: LWTech forms partnerships with governmental and community organizations, educational institutions, business, and labor in order to effectively support the Institution’s mission.
  - This is assessed in Table 6 (LWTech Assessment of External Engagement – a modified Carnegie assessment)
- **College Community**: LWTech provides a safe, supported and engaging learning environment for students and work environment for faculty and staff.
  - This is assessed in Table 7 (Key Performance Indicator from the Employee Satisfaction survey)
## Appendix B: Mission Fulfillment Metrics

### Table 4: Assessment of Core Theme - Pathways

<table>
<thead>
<tr>
<th>a) Racial Equity Gap in College-Level Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• % HU enrollment at LWTech (LW) and our service district (SD) K-12 schools</td>
</tr>
<tr>
<td>LW: 16% SD: 12% Gap: 0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b) Racial Equity Gap in Transition Rate to College-Level Enrollment from Basic Education for Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>• % of students that transitioned to college-level (completed 6 college-level credits)</td>
</tr>
<tr>
<td>HU: 10% Non-HU: 5% Gap: 0%</td>
</tr>
</tbody>
</table>

### Table 5: Assessment of Core Theme - Student Achievement

<table>
<thead>
<tr>
<th>a) Racial Equity Gap in Three-year Completion Rate for AAS Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>• % of students who completed AAS degree in 3 years or less</td>
</tr>
<tr>
<td>HU: 39% Non-HU: 42% Gap: 3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b) Racial Equity Gap in Three-year Completion Rate for BAS Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>• % of students who completed BAS degree in 3 years or less</td>
</tr>
<tr>
<td>HU: 100% Non-HU: 83% Gap: 0%</td>
</tr>
</tbody>
</table>
## Appendix B: Mission Fulfillment Metrics

### Table 6: Assessment of Core Theme - External Engagement

<table>
<thead>
<tr>
<th>LWTech Assessment of External Engagement</th>
<th>Baseline 2021-22</th>
<th>3-Year Target</th>
<th>Year 1: 2021-22</th>
<th>Year 2: 2022-23</th>
<th>Year 3:</th>
</tr>
</thead>
<tbody>
<tr>
<td>k) Objective 1 Composite Score</td>
<td>Indicator 1: 2.2</td>
<td>Indicator 1: ≥4</td>
<td>Planning.</td>
<td>Indicator 1:</td>
<td>2.2</td>
</tr>
<tr>
<td>Partnership goals:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Partnerships are formed effectively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l) Objective 2 Composite Score</td>
<td>Indicator 2: 2.7</td>
<td>Indicator 2: ≥4</td>
<td>Planning.</td>
<td>Indicator 2:</td>
<td>2.7</td>
</tr>
<tr>
<td>Partnership goals:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Partnerships meet needs of divisions/ departments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m) Objective 3 Composite Score</td>
<td>Indicator 3: 2.2</td>
<td>Indicator 3: ≥4</td>
<td>Planning.</td>
<td>Indicator 3:</td>
<td>2.2</td>
</tr>
<tr>
<td>Partnership goals:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Partnerships support student preparation for the workplace.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 7: Assessment of Core Theme - College Community

<table>
<thead>
<tr>
<th>Employee Satisfaction Survey Key Performance Indicator (KPI) – LWTech is an “Employer of Choice”</th>
<th>Baseline Fall 2018 to Fall 2019</th>
<th>3-Year Target</th>
<th>Year 1: Fall 2019-Fall 2020</th>
<th>Year 2: Fall 2020-Fall 2021</th>
<th>Year 3: Fall 2021-Fall 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>n)</td>
<td>All: 73%</td>
<td>All: 75%</td>
<td>All: 85%</td>
<td>All: 78%</td>
<td>All: 78%</td>
</tr>
<tr>
<td>• Racial Equity Gap in KPI from Employee Satisfaction Survey</td>
<td>HU: 70%</td>
<td>Gap: 0-3%</td>
<td>HU: 81%</td>
<td>HU: 82%</td>
<td>HU: 82%</td>
</tr>
<tr>
<td>• Non-HU: 80%</td>
<td>Gap: 10%</td>
<td>Gap: 5%</td>
<td>Non-HU: 81%</td>
<td>Non-HU: 80%</td>
<td>Gap: 2%</td>
</tr>
</tbody>
</table>


Appendix B: Mission Fulfillment Metrics

Information and Notes

Information on targets in Mission Fulfillment Plan

Overall note: The actions by the college through this plan aim to close the racial equity gap(s) at LWTech.

- **Goal 1: Address and dismantle structural racism**
- **Goal 2: Continue implementation of Guided Pathways.**
  - For data looking at “All”, the targets aim to maintain the baseline within a likely non-statistically significant range.
- **Goal 3 – Position LWTech as the integral leader in workforce retraining as Washington State prepares for short and long-term economic recovery.**
  - The proposed target is to meet state goals for enrollment.
  - The proposed target range for reserves is a long-standing goal of the college and meets the board policy to maintain “sufficient” reserves.

Information on targets in Core Theme Assessment

- **Core Theme: Pathways**
  - No notes
- **Core Theme: Student Achievement**
  - No notes
- **Core Theme: External Engagement**
  - For additional information, please see: [https://public-purpose.org/initiatives/carnegie-elective-classifications/community-engagement-classification-u-s/](https://public-purpose.org/initiatives/carnegie-elective-classifications/community-engagement-classification-u-s/)
- **Core Theme: College Community**
  - The target range for closing opportunity gaps within a likely non-statistically significant range.

Data Citations and Data Notes

General data note: Access to some of the links below may require being on the LWTech network or a login from LWTech. HU is short for historically underrepresented students of color (American Indian, Black/African American, Hispanic, and Pacific Islander).

Table 1

a) **Student Retention**
   i. Source: SBCTC FTEC Dashboard (modified version available at [LWTech.edu/data](http://LWTech.edu/data)); includes all intent codes, disaggregated by HU/Non-HU categories.
   ii. Notes: Retention is defined as fall-to-fall

b) **Employee Retention**
   i. Source: Internal dashboard (“Employees – Retention”) using PPMS data
   ii. Notes: Includes classified, exempt, and full-time faculty. 5-year periods are defined by academic years (e.g., “Started 2014-2019” includes employees that started between July 1, 2014 and June 30, 2019). 2-year retention is based on months of employment (≥24) from an employee’s start-date.

Table 2
Appendix B: Mission Fulfillment Metrics

a) Persistence rate
   i. Source: SBCTC FTEC Dashboard (modified version available at LWTech.edu/data). Fall-to-Winter persistence; includes all intent codes.

b) Persistence racial equity gap
   i. Source: SBCTC FTEC Dashboard (modified version available at LWTech.edu/data). Fall-to-Winter persistence; includes all intent codes, disaggregated by HU/Non-HU categories.
   ii. Notes: Persistence is defined as 1st-to-2nd quarter enrollment.

Table 3

a) Enrollment
   i. Source: SBCTC Enrollment/FTE Reports and state-funded FTES (full-time equivalent students).

b) Reserves
   i. Sources: Annual Financial Summaries: https://www.lwtech.edu/about/budget-services/budget

Table 4

a) College-Level Enrollment
   i. Sources:
      1) Modified version of LWTech’s Enrollment by Program dashboard using Legacy institutional data. Note: excludes HS, BEDA and Apprenticeship, PAED based on program code (EPC)
      2) OSPI data for K-12 enrollment in LWTech’s service area (includes Bellevue, Issaquah, Lake Washington, Mercer Island, Northshore, Riverview, Skykomish, and Snoqualmie Valley school districts).
         3) Data not yet available from OPSI to updated table.
   b) Transition Rate to College-Level Enrollment from Basic Education for Adults (BEdA)
      i. Source: SBCTC Student Achievement Initiative (SAI) data: https://www.sbctc.edu/colleges-staff/research/data-public/sai3-points-summary-dashboard.aspx
      ii. Note: Looks at students that were federally reportable Basic Skills students in WABERS during the current or two previous academic years (CurrentOrPriorBS = “Y”) that have transitioned to college-level enrollment (BasicSkills_CollegeTransition = “1”). Transitioned to college-level means that the student has completed six college-level credits.
         1) Data not available until Winter 2023. This uses SAI data provided by SBCTC via dataLink, usually at the end of Fall quarter for the previous academic year.
Table 5

a) **AAS three-year completion rates**
   i. Source: Modified version of LWTech’s *Persistence and Completion* dashboard
   ii. **Note:** Data reflects award-seeking students with “F” intent codes (Prof/Tech program). These rates, post-ctcLink, can be tracked with a merged data pull joining SIDs and EMPLIDs.

b) **BAS three-year completion rates**
   i. Source: Modified version of LWTech’s *Persistence and Completion* dashboard
   ii. **Note:** Data reflects award-seeking students with “I” intent codes (Applied Baccalaureate program). Completion rates reflect data three years from the first quarter in the BAS program since an AAS degree is required for BAS program enrollment (e.g., values for the 2017-18 BAS cohort are completion rates as of the end of the 2020-21 academic year).

Table 6

*Carnegie Assessment Notes:* This assessment of external engagement was modeled after the Carnegie assessment process; questions were adapted for LWTech. [Questions for Fall administration.]

k) **Objective 1:** The College effectively forms external engagement partnerships with a variety of community organizations.

l) **Objective 2:** The college's external engagement partnerships meet the needs of departments and divisions across campus.

m) **Objective 3:** The college's external engagement partnerships support students in being prepared for the workplace (today and tomorrow).

Table 7

n) **Employee Satisfaction Survey Key Performance Indicator (KPI)**: This metric includes the following questions and averages the responses over each question.
   i. My supervisor treats me with respect
   ii. My supervisor clearly communicates work responsibilities
   iii. There is a spirit of camaraderie and teamwork at LWTech
   iv. Employees are praised for outstanding performance
   v. The work I do is valuable to the College
   vi. LWTech has an inclusive culture
   vii. LWTech has an innovative culture
   viii. LWTech has a collaborative culture
   ix. LWTech has a respectful culture
   x. I have opportunities to participate in campus-wide decision making
   xi. The input I provide helps shape the future of LWTech
   xii. There is effective communication between my department and other departments.
   xiii. I would recommend LWTech as a great place to work. *(added in 2021)*

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2 Minor revisions were made to the 2021 Employee Survey to reword several questions included in the KPI; however, the intent of the questions remains the same and the baseline data still captures the intended assessment.
Appendix C: LWTech EDI Strategic Plan

Equity Diversity and Inclusion Strategic Plan

June 6, 2022

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A Message from the President

Dear LWTech Community:

Since 2015, Lake Washington Institute of Technology (LWTech) has been actively engaged in Equity, Diversity, and Inclusion work. This work began in earnest when the college introduced, with the support of the Board of Trustees, its Equity, Diversity and Inclusion (EDI) Plan, which was the culmination of three years of work that took place across the campus. Now, through the expert leadership from the Office of Equity, Diversity, and Inclusion, and with input from the college community, I’m proud to share that LWTech has created an updated and robust EDI Plan.

We know since the murder of George Floyd on May 25, 2020, our country has experienced a racial awakening and calls for social justice that we haven’t seen in decades. And, while the college has been engaged in EDI work for several years, we must continue to underscore the importance of this work; we can’t let up on our pursuit of systemic change in our country to become anti-racist in our community and at our college.

Our ongoing EDI work at the college also aligns with the new requirements of Washington state Senate Bills 5194 and 5227, which require colleges to deliver equity-centered trainings and outcomes as part of the State Board for Community and Technical Colleges’ mission of leading with racial equity. This is at the forefront of our own Mission Fulfillment Plan, which supports our Core Values that are grounded in equity:

- **Inclusive**: We intentionally create a welcoming environment where all feel a sense of belonging.
- **Innovative**: We are leaders in maximizing opportunities to create a thriving college community.
- **Collaborative**: We are open to change and work together to achieve success for all.
- **Respectful**: We engage others with acceptance, open-mindedness, courtesy, and care.

While we’ve made great strides, we are not yet an anti-racist college. We continue to evolve as a college community, and I’m incredibly proud of the work the college has done, especially during the pandemic, with innovative training, the development of this EDI Strategic Plan, rolling out new Diversity and Social Justice (DSJ) courses, the growth of the Bias Response Team, and Equity, Diversity and Inclusion Council. We have a lot to be proud of, and yet there’s still more work to do.

The net result for the community is that we’re graduating students who are equipped to work, thrive and lead in a diverse workplace. They are better prepared to advocate for equitable changes in their chosen fields, especially in light of the glaring spotlight shone upon healthcare inequities during the pandemic.

LWTech is also a major community employer and there’s a ripple effect of our work. We are a catalyst for change not only in the college, but in the communities we serve as well. Our employees are committed to EDI work, which in turn impacts our families, friends and communities, not just in Kirkland, but around the world.

As I mentioned above, while we are not new to EDI work, there is still more for us to do. I continue to be incredibly proud of what we’ve accomplished so far and look forward to all we will accomplish together.

Dr. Amy Morrison
President
A Message from LWTech’s Board of Trustees

Dear LWTech Community:

The Board of Trustees acknowledges and commends the Equity, Diversity, and Inclusion (EDI) work that Executive Cabinet and the entire college community has engaged in over the past nine years under the steady leadership of Dr. Morrison. The development of the updated EDI Plan is a culmination of years of EDI work at the college and is reflective of the work the college and country are doing to bring systemic change around anti-racism and EDI efforts. This work is also in alignment with the new requirements of Washington state Senate Bills 5194 and 5227, which require colleges to deliver equity-centered trainings and outcomes as part of the State Board for Community and Technical Colleges’ mission of leading with racial equity.

We believe this Plan aligns clearly with the vision of the State Board for Community and Technical Colleges’ work to lead our system with racial equity. We are united in our support, leadership, and policy governance of these efforts. Our annual goals also emphasize the importance of EDI work, and how seriously we take it as the governing body of the college.

The first goal of the 2021-2022 Board of Trustees Annual Goals and Strategies is to, “Provide strong leadership and direction for the college.” Within that goal, we work to evaluate and approve policies that promote anti-racism, equity, diversity, and inclusion, as well as student enrollment, achievement, and completion. We also work to evaluate and approve policies that support anti-racism, equity, diversity, and inclusion in both the learning and workplace environments.

As Trustees, we are involved in EDI efforts through the Washington State Association of College Trustees and in our own lives and workplaces, and we are committed to the EDI and anti-racism efforts at the college, as are the students, faculty and staff. We know there is more work to do, and we are confident that as we all work together, we will create an equitable, diverse and inclusive community at LWTech.

We are extremely proud of the collaborative work, led by the team in the Office of Equity, Diversity and Inclusion, that went into the creation of this EDI Plan.

We look forward to seeing milestones being met as the Plan rolls out over the coming years.

Respectfully,

The Board of Trustees of Lake Washington Institute of Technology

Anne Hamilton
Dr. Lynette D. Jones, Vice Chair
Robert Malte, Chair
John Suk
Laura Wildfong
Statement from the Executive Director of EDI

LWTech’s EDI efforts are driven by our mission, core values, and the need to build out a comprehensive EDI Plan, a “living” document with the aim of planning the amazing work the college engages in to dismantle systemic racism and close opportunity gaps. Much of this work began several years ago and is now structured around key pillars of our mission, vision, and core values.

The Four Connections, Community of Belonging, and now our Diversity & Social Justice efforts: Each of these frameworks are used to strengthen our community, shape our learning environment, and provide an enriching experience for students, faculty, and staff as we continue to scale our EDI initiatives into greater action.

Many students, faculty, and staff have contributed substantially to improving the equity, diversity, and inclusion of this community, and this collaborative effort further serves as a reminder that this heart work is continuous and that our collective efforts, past and present, serves as a sustainable benchmark for our desire to evolve, innovate, and transform.

In this plan, we hope to accomplish the following:

- Identify, acknowledge and address areas of systemic stagnation which obstruct our ability to support the growth and advancement of equity, diversity and inclusion through meaningful conversations and comprehensive professional development.
- Lead, advise, guide and advocate for policy and program development that builds upon and promotes an atmosphere which aligns with and sustains the diverse needs of our entire campus community, fully rooted and grounded in a framework of equity.
- Envision meaningful change that amplifies the diversity of voices present on our campus and show sustainable, measurable and data-driven results that validate our shared interests in the collective success of students, staff and faculty.

In 2021 our State Legislature committed its support of EDI through the passage of SB 5227 and SB 5194 (please see page 5) for details. These Bills provide valuable monetary resources in the hands of Institutions of Higher Ed to further the work on equity throughout our CTC System. These efforts stress the importance of our system’s wide vision through SBCTC to Lead with Racial Equity.

We intend to intentionally promote those interests through open dialogue with college leadership, through transparency of communications and with collaborative decision making.

The Office of EDI is honored to be on this amazing journey of transformation with you and we look forward to growing in our capacity to authentically engage and progress in bold awareness of our collective humanity.

Robert Britten
Executive Director, EDI
Statement from EDIC

The Equity, Diversity and Inclusion Council (EDIC) is in full support of the Strategic Plan drafted by the EDI Taskforce at LWTech. The EDIC has been working for many years on these goals and looks forward to the college community working with a formalized plan that supports the goals of establishing the language, activities of the college, and cultivating staff and faculty that represent and reflect our community.

Through the work of our subcommittees: Institutional Research, HR and Recruiting, Community Building and Professional Development – Onboarding & Training, and Community Building and Professional Development – Professional Development, the EDIC:

- Develops a glossary of working definitions, (which is maintained as a living document to respect the evolving nature and understanding of the concepts of EDI as they develop in real time). The glossary was developed through extensive research and review to guide conversations about diversity, equity and social justice.
- Develops and hosts reflective training activities to allow faculty and staff to continue to build lifelong skills for interacting with and appreciation of diverse populations, systemic inequities, and the importance of inclusion. These activities include book clubs, topical readings with discussion, and trainings on areas of EDI expertise within the Council meetings.
- Continues to revise the language of the HR website to emphasize diversity and inclusion in the hiring practices, created skills- and experience-based criteria to counteract bias in candidate selection, and developed the practice of including an EDI representative on every hiring committee at the college to provide oversight to the EDI practices of each hire.
- Supports data needs related to the EDI Strategic Plan through partnership with the Office of Research & Grants, performs an annual audit of LWTech’s Employee Satisfaction Survey, and supports additional EDI survey administration on campus.

The work of the EDIC will continue to evolve to support the goals outlined within the EDI Strategic Plan.
Introduction to the Strategic Plan

The Office of EDI is delighted to present the draft goals for the forthcoming Equity, Diversity and Inclusion Strategic Plan (EDI SP). Each goal of this plan is designed to nest within the approved Mission Fulfillment Plan and outlines work through 2023. During the academic year of 2022-23, the Office of EDI will assess whether these goals need to be updated in alignment with accreditation and future Mission Fulfillment Plans.

This plan is proposed in recognition of work done to date on the Mission Fulfillment Plan; however, the practical nature of this alignment in no way lessens the intentionality and gravity of this work alongside the continuous updates needed in equity work. This is a living document that will be updated as follows: Goals will be approved annually each Fall (with revisions as needed) and the Office of EDI will publish a quarterly report on progress. This internal quarterly report will be published on the Team: EDI Conversations;¹ more public-facing materials are stored at: https://www.lwtech.edu/about/diversity/. Metrics will be added in the 2022-23 academic year.

Statement around Board Approval

The draft goals and strategies were presented to the Board of Trustees in draft form during their May 9th Board Retreat and revised for full approval at the June 6th Board Meeting in preparation for submission to SBCTC in July.

¹ EDI Conversations is a confidential place to ask about EDI work: https://lwtech.sharepoint.com/sites/EDIconversations

Appendix C: LWTech EDI Strategic Plan
Mission Fulfillment at LWTech and Alignment with the SBCTC

LWTech’s Mission Fulfillment Plan, which runs from 2020-23, centers itself on the strategic vision of the State Board for Community and Technical Colleges (SBCTC), shown below. The full Mission Fulfillment Plan is presented here and continues through Page 2.

Strategic Vision of LWTech and the SBCTC

In partnership with the Washington State Board for Community and Technical Colleges (SBCTC), Lake Washington Institute of Technology (LWTech) is guided by SBCTC’s strategic vision:

Leading with racial equity, our colleges maximize student potential and transform lives within a culture of belonging that advances racial, social, and economic justice in service to our diverse communities.

LWTech Mission

Grounded in equity and the need for resilience, the mission guides our overall direction as a college:

To prepare students for today's careers and tomorrow's opportunities

LWTech Vision

Grounded in equity and the need for resilience, the vision inspires how we see ourselves in the future:

To be the college of choice for workforce education

LWTech Core Values

Grounded in equity and the need for resilience, the values give us the tools to implement our mission and vision:

- Inclusive: We intentionally create a welcoming environment where all feel a sense of belonging.
- Innovative: We are leaders in maximizing opportunities to create a thriving college community.
- Collaborative: We are open to change and work together to achieve success for all.
- Respectful: We engage others with acceptance, open-mindedness, courtesy, and care.

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**LWTech Core Themes**

Grounded in equity and the need for resilience, the core themes are the pillars supporting the mission and provide long term objectives (7 years aligned with accreditation review cycles) for the college:

- **Pathways**
  
  LWTech is accessible to the community by providing multiple entrance points and educational pathways. The college is a conduit for students to upgrade their skills, transition into new careers, or further their education and training.

- **Student Achievement**
  
  At LWTech, students gain the skills and knowledge needed to achieve their educational goals and to participate in the workforce.

- **External Engagement**
  
  LWTech forms partnerships with governmental and community organizations, educational institutions, business, and labor in order to effectively support the Institution's mission.

- **College Community**
  
  LWTech provides a safe, supported and engaging learning environment for students and work environment for faculty and staff.
LWTech Mission Fulfillment Goals

Grounded in equity and the need for resilience, the planning goals are the short term (3-4 years), action focused goals aligned with the Core Themes (formerly called strategic planning goals):

**Goal 1**
Address and dismantle structural racism

Associated Core Themes

**Goal 2**
Continue implementation of Guided Pathways

Associated Core Themes

**Goal 3**
Position the college as a leader in workforce training for the state’s short-term and long-term economic recovery

Associated Core Themes
Senate Bills

In 2021, the Washington State Legislature passed two bills that, in addition to work in progress at LWTech, provided guidance in writing this plan. The two bills are:

- **Senate Bill 5227** – **Diversity in Education**: This bill established annual diversity, equity and inclusion professional development and learning opportunities for college and university students, faculty, and staff. The bill also establishes regular campus climate assessments and listening and feedback sessions for the college community.

- **Senate Bill 5194** – **Equity & Access in Higher Education**: This bill implemented a Faculty Diversity program, requirements to post DEI (Diversity, Equity, and Inclusion) definitions on the website and outreach/peer mentoring for students.

Statement of Thanks to the Task Force

On behalf of The Office of EDI, we want to say “thank you” to our EDI Task Force Members:

- Anthony Bowers
- Sherry McLean
- Brian Ramos
- Sharon Raz
- Jenny Rogoff
- Leslie Shattuck
- Sam Gracie
- Sarah Chandler
- Cathy Copeland
- Tuan Dang
- Kimberly Goddard
- Elsa Gossett
- Corrine Ash

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4 The bill text, as passed, is here: [https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/Senate/5227-S2.SL.pdf?q=20220414170954](https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/Senate/5227-S2.SL.pdf?q=20220414170954) Additional information on the bill is available here: [https://app.leg.wa.gov/billsummary?BillNumber=5227&Initiative=false&Year=2021](https://app.leg.wa.gov/billsummary?BillNumber=5227&Initiative=false&Year=2021) Both webpages were accessed in April 2022.

5 The bill text, as passed, is here: [https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/Senate/5194-S2.SL.pdf?q=20220414170853](https://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/Senate/5194-S2.SL.pdf?q=20220414170853) Additional information on the bill is available here: [https://app.leg.wa.gov/billsummary?BillNumber=5194&Initiative=false&Year=2021](https://app.leg.wa.gov/billsummary?BillNumber=5194&Initiative=false&Year=2021) Both webpages were accessed in April 2022.
What we have accomplished in such a short period of time is simply remarkable. You worked very hard and put in long hours of reading, listening and adding valuable content in our mission to achieve our collective goal of formalizing our college’s EDI Strategic Plan.

The success of this team is a college success, and we couldn’t have done it without you. While there is still much work to be done, we are thankful that you will continue to add great value and expertise to this fully collaborative process. We can’t applaud you enough for a job well done.

**EDI Summary of Accomplishments Across Campus since 2020**

LWTech, in developing this plan, laid groundwork for an equity-focused future and commitment to diversity. LWTech’s use of Open Educational Resources (OER) and establishment of the student RISE Center and the Center of Excellence for Veteran Student Success (CEVSS) are but a few of the areas of growth and access in our equity work.

As this plan developed, accomplishments from the past two years across the college included the following:

- Established the Office of Equity, Diversity and Inclusion.
- Formalized Institutional Land Acknowledgement; began widespread adoption of this acknowledgement in campus and department meetings.
- Conducted a formal campus climate assessment.
- Conducted Listening Sessions for Black, Indigenous, People of Color (BIPOC) faculty, staff, and students. Engaged in discussion on racial trauma with an outside facilitator.
- Offered public health vaccine clinics for faculty, staff, students, and community members.
- Facilitated EDI-focused trainings including topics such as microaggressions, cultural humility and forms of respect.
- Hosted EDI-related book clubs.
- Established first-ever Diversity and Social Justice (DSJ) requirement for associate-level degrees and certificates; to date, 35 instructors have completed training to modify curriculum to infuse the equity lens across programs.
- Revamped faculty tenure guide to center equity in the tenure process; for example, tenure candidates will provide reflections on EDI work to broad audiences on campus.
- Launched *Ask EDI* via Microsoft Teams, where the college community can pose questions to EDI leadership.
- Began regular EDI Leadership Training Sessions for the Leadership Team on campus. The Leadership Team is made up of exempt employees.
- Provided Senate Testimony for the passage of SB 5227.
- Hosted annual DSJ spotlight week.
- Created re-entry support for formerly justice-involved students.
- Established the Digital Accessibility Committee and the annual Global Accessibility Awareness Days (GAAD).
- Expanded the role of the Bias Response Team (BRT) to provide recommendations to the college administration regarding responses to hate/bias incidents in the college community.
• Ensure widespread incorporation of pronouns into formal/branded email signatures and employee nametags.
• Created DSJ collections in the college library with physical and electronic resources.
Background Data

Following the May 2022 Board of Trustees meeting; the draft goals and strategies were further refined, and additional feedback sought and received from various stakeholder groups by attending department level meetings and integrating those considerations into the plan.

Metrics of Success

We will have an ongoing process of accessing and evaluating our success in collaborative partnership with our Institutional Research Division and collecting data that informs what focus areas need attention. Our metrics of success will be measured by the results we get in attracting and retaining students, staff and faculty from underrepresented communities, and by our college being fully aware of barriers to success and actively working to disrupt them.

Why focus on three categories?

![Diagram showing systems, student, and employee]

How is this plan aspirational?

- This will be developed in strategies, actions and accountability measures that align with mission fulfillment.
- There is a level of repetitiveness as some aspects of the work overlap from department to department and that is necessary to ground the college in the long-term aspects of equity centered work.
- Not dissimilar to past work; we are being direct in the approach we are taking. The work has happened historically, but we aim to provide added accountability and regular updates on progress in each of our critical areas. It is by no means solely the work of the Office of EDI, but college wide initiatives that will require the entire college’s participation.
Mission Fulfillment Plan, Goal One: Address and dismantle structural racism.

**EDI Goal One:** Create and adopt a shared framework of equity through an established common language, that is informed by historically underserved communities, that will become the foundation for the collaborative reexamination of institutional structures and processes.

**EDI Goal Expanded:** This goal acknowledges the inherit structural racism imbedded within our systems and the need to continue to build on previous EDI work. This goal establishes a shared framework of equity that will be the foundation in reexamining policies and processes throughout LWTech. Using collected feedback from students, staff, and faculty, LWTech will design and implement campus-wide trainings and initiatives on a wide variety of EDI themes to begin the process of grounding our campus with a common language and to inform our new and ongoing campus initiatives.

**Strategies:**

- Standardize and publish EDI definitions for multiple levels of EDI literacy
- Provide ongoing diversity professional development for the college community inclusive of faculty and staff
- Develop and/or provide EDI-focused programs and activities to students
- Reexamine institutional policies and processes through a shared equity framework.
- Implement shared governance to promote accountability and transparency.
- Provide support and resources to create and expand on each division’s annual dept-level plan through a shared framework of equity.
- In addition to the proposed 5-year campus climate assessment in Senate Bill 5227, we will assess our college at least every two years to coincide with our EDI Strategic Plan submission to SBCTC to continuously evaluate our effectiveness in identifying and addressing structural barriers.

**This goal and accompanying strategies contribute to the mission fulfillment plan by:**

- Introducing a common language of equity-based definitions as the foundation for building a better Lake Washington Institute of Technology.
- To understand the foundational components of structural racism we must first understand how they were/are used to adversely impact underrepresented communities.
- Being specific and intentional about the need to address and dismantle structural racism and provide institutional training and support structures that scaffold our learning and growth in this area.
- Providing transparency on the specific steps we are taking to inform and collaborate with our students, staff and faculty on the development and deployment of antiracist training and professional development.
- Collective efficacy necessitates a common language; this language will be used to facilitate discussions around structural racism. Examples of core terms we will define are:
How this goal aligns with SB 5227 and 5194:

- **5227** - The legislature therefore seeks to ensure that public institutions of higher education provide faculty and staff, as well as students, with training to give them tools to address matters related to antiracism, diversity, equity, and inclusion. Each institution of higher education must: (a) Provide professional development, either existing or new, focused on diversity, equity, inclusion, and antiracism for faculty and staff. This program must be developed in partnership with the institution's administration, faculty, staff, and student leadership groups.

- **5194** - Each community and technical college shall conspicuously post on its website and include in the strategic plans, programs, and reports definitions for key terms including: Diversity, equity, inclusion, culturally competent, culturally appropriate, historically marginalized communities, communities of color, low-income communities, and community organizations. These legislative guides are also in keeping with SBCTC’s mission to Lead with Racial Equity.
Mission Fulfillment Plan, Goal Two: Continue implementation of Guided Pathways.

EDI Goal Two: Implement Guided Pathways (GP) with an equity focus to improve student retention and completion for HU students.

EDI Goal Two Expanded: This goal seeks to create, expand, and evaluate campus-wide interventions and supports that will assist students from onboarding to completion and in any transitions in-between. The goal establishes support for both historically underrepresented students and those who have been disproportionately impacted by the pandemic. This goal builds on the successful strategies already established, such as the 4 Connections and The Diversity and Social Justice (DSJ) requirement and seeks to explore new ways to expand on our successes.

Strategies:

- Support faculty by recommending practices, programs and services to promote retention of BIPOC students
- Support the Diversity and Social Justice (DSJ) program
- Support Outreach and Recruitment staff as a college to ensure annual planning removes barriers to underrepresented students
- Support the New Student Orientation (NSO) planning team in creating student-focused activities and education with an EDI focus
- Support Bias Response Team (BRT) in taking proactive steps to reduce discrimination and exclusion on campus
- Using student completion data identify specific student populations in need of retention interventions where measurable actions can be achieved.
- Support Associated Student Government (ASG) and Student Programs

This goal and accompanying strategies contribute to the mission fulfillment plan by:

- Providing continued support of students throughout their time at LWTech will in turn support implementation of GP throughout every program of study
- Using GP practices through a lens of equity will bolster the removal of barriers and successful student retention and completion rates, which feeds back into the GP metrics – the two dovetail together with the goal of student success

How this goal aligns with SB 5227 and 5194:

- 5227 - The legislature finds that developing and maintaining a culture of belonging and support for students, faculty, and staff at institutions of higher education is essential to student success, and that faculty and staff play a key role.
- 5194 - It is the legislature’s intent that successful programs such as guided pathways be implemented at all community and technical colleges with the goal of doubling completion rates (as measured by completion in six years) for students in the next eight years. To accomplish this goal, the legislature intends to achieve full implementation of research-based programs to improve student outcomes, such as guided pathways.
Mission Fulfillment Plan, Goal Three: Position the College as a leader in workforce training for the state’s short term and long-term economic recovery.

**EDI Goal Three:** Attract, develop, and support staff and faculty who are representative of our community.

**EDI Goal Three Expanded:** To position the college as a leader in Workforce training, our alignment measures will attract, develop, and mentor staff and faculty who are representatives of our community. This places focused attention on our recruitment and retention practices and will draw attention to the ways they impact underrepresented groups. Collaborating with our internal partners of the Equity, Diversity and Inclusion Council (EDIC) to move this meaningful work throughout the college will be an accountability measure as well as a measure of how we are doing to be inclusive campus wide.

**Strategies:**

- Advance employee recruitment strategies with an equity mindset.
- Advance employee retention strategies with an equity mindset.
- Ensure competitiveness of LWTech by aligning the college’s workforce with student demographics.
- Engage with and establish ongoing partnerships with off campus communities of color and other underrepresented groups.

This goal and accompanying strategies contribute to the mission fulfillment plan by:

- Being intentional in our assessment of who and from where we recruit diverse staff and faculty as a representation of our student body and our community.
- When reviewing staff and faculty candidate pools, ensure that a diverse body of candidates are represented.
- This alignment can be measured by retention data on staff and faculty and tied to correlated data with student success.
- Review our hiring processes with our established Equity Framework.

**How this goal aligns with SB 5227 and 5194:**

- **5227** - The legislature intends that each public institution of higher education assess the learning, working, and living environment on campus that students, faculty, and staff experience to better understand the evolving state of diversity, equity, and inclusion.
- **5194** - The legislature requires the implementation of a Faculty Diversity program to aid in recruitment and retention of faculty from diverse backgrounds. This must be based on proven practices in diversity hiring processes.
Future Directions

This is a living document that will be regularly reviewed and updated for the purpose of remaining accountable to our students, staff, and faculty. We will continuously engage with our college community to seek out best practices and greater alignment with our mission fulfillment goals as they directly impact the enrollment, success and retention of our students.

Conclusion

The Office of EDI will be actively engaging with the college community to conduct and engage in this work. We will establish a practice of being responsive to the needs of our students. We know that if we reach the most marginalized among us effectively, we all benefit from that reach. We will continuously invite participation and address barriers to success in an open and transparent manner.
Appendix D: National Comparison Data

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Appendix D: National Comparison Data

Percent of Target FTE Enrollments

<table>
<thead>
<tr>
<th></th>
<th>LWTech</th>
<th>BTC</th>
<th>RTC</th>
<th>CPTC</th>
<th>SSC</th>
<th>Average of State Peers*</th>
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<tr>
<td>2020-21</td>
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<td>72%</td>
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<td>75%</td>
<td>76%</td>
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*This information is not shown for NWTC as we were unable to identify a comparable target from them.

Figure 1. Percent of Target FTE Enrollments

Fall-to-Fall Retention Rate

Figure 2. Fall-to-fall retention rates for first-time, full-time degree-seeking students

Figure 3. Fall-to-fall retention rates for first-time, part-time degree-seeking students
Graduation Rates

Figure 4. Graduation rates of full-time, first-time degree/certificate-seeking undergraduate students completing their program within 150% of normal time to program completion

Appendix D: National Comparison Data

Figure 4. Graduation rates of full-time, first-time degree/certificate-seeking undergraduate students completing their program within 150 percent of normal time.
Appendix E: Disaggregated Student Data

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### Race/Ethnicity

#### Enrollment

<table>
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<tr>
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<td>192</td>
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<td>294</td>
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*Figure 1. Enrollment (headcount) for all students at LWTech by year.*

#### Persistence Rates

<table>
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<tr>
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<td>American Indian/Alaska Native</td>
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<td>87%</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>70%</td>
<td>76%</td>
<td>69%</td>
<td>61%</td>
<td>74%</td>
<td>77%</td>
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<td>Hispanic/Latino</td>
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<td>71%</td>
<td>82%</td>
<td>70%</td>
<td>81%</td>
<td>76%</td>
</tr>
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<tr>
<td>White</td>
<td>83%</td>
<td>82%</td>
<td>79%</td>
<td>78%</td>
<td>84%</td>
<td>80%</td>
</tr>
<tr>
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<td>79%</td>
<td>83%</td>
<td>81%</td>
<td>87%</td>
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<td>75%</td>
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<td>84%</td>
<td>80%</td>
<td>73%</td>
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</table>

*Figure 2. Fall-to-Winter persistence rates for first-time, award-seeking students at LWTech.*
Appendix E: Disaggregated Student Data

Retention Rates

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
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<td>American Indian/Alaska Native</td>
<td>58%</td>
<td>50%</td>
<td>52%</td>
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<tr>
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<td>50%</td>
<td>52%</td>
<td>62%</td>
<td>45%</td>
</tr>
<tr>
<td>Black/African American</td>
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<td>39%</td>
<td>37%</td>
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<tr>
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<td>67%</td>
<td>60%</td>
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<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
<td>56%</td>
<td>54%</td>
<td>54%</td>
<td>51%</td>
<td>55%</td>
</tr>
<tr>
<td>White</td>
<td>54%</td>
<td>51%</td>
<td>52%</td>
<td>59%</td>
<td>50%</td>
</tr>
<tr>
<td>2+ Races</td>
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<td>50%</td>
<td>51%</td>
<td>60%</td>
<td>61%</td>
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<tr>
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<td>57%</td>
<td>51%</td>
<td>52%</td>
<td>59%</td>
<td>50%</td>
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</tbody>
</table>

Figure 3. Fall-to-Fall retention rates for first-time, award-seeking students at LWTech.

Completion Rates

<table>
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<tr>
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<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
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<td>42%</td>
<td>41%</td>
<td>38%</td>
<td>45%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>22%</td>
<td>19%</td>
<td>32%</td>
<td>26%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>18%</td>
<td>45%</td>
<td>25%</td>
<td>38%</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>39%</td>
<td>37%</td>
<td>38%</td>
<td>38%</td>
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<tr>
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</table>

Figure 4. 3-year completion rates for first-time, award-seeking students at LWTech.
Appendix E: Disaggregated Student Data

Figure 5. 4-year completion rates for first-time, award-seeking students at LWTech.

<table>
<thead>
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<th>Race</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
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<td>46%</td>
<td>43%</td>
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<tr>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>23%</td>
<td>23%</td>
<td>21%</td>
<td>32%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>27%</td>
<td>22%</td>
<td>48%</td>
<td>28%</td>
</tr>
<tr>
<td>Native Hawaiian/Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>42%</td>
<td>43%</td>
<td>40%</td>
<td>39%</td>
</tr>
<tr>
<td>2+ Races</td>
<td>41%</td>
<td>45%</td>
<td>45%</td>
<td>39%</td>
</tr>
<tr>
<td>Not Reported</td>
<td>62%</td>
<td>38%</td>
<td>41%</td>
<td>36%</td>
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</table>

Figure 6. 4-year employment rate and earning for first-time, award-seeking students that earned a degree/certificate at LWTech.

Post-College Employment

<table>
<thead>
<tr>
<th>Race</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tr>
<td>Black/African American</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian/Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2+ Races</td>
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</tr>
<tr>
<td>Not Reported</td>
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</table>
Appendix E: Disaggregated Student Data

**Historically Underrepresented (HU) Students**

**Enrollment**

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<td>2015</td>
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<td>2016</td>
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<td>2018</td>
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<td>2019</td>
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<td>2021</td>
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*Figure 7. Enrollment (headcount) for all students at LW Tech by year.*

**Persistence Rates**

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<td>2021</td>
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<td>80%</td>
<td>71%</td>
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*Figure 8. Fall-to-Winter persistence rates for first-time, award-seeking students at LW Tech.*
Appendix E: Disaggregated Student Data

Retention Rates

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<tr>
<td>2020</td>
<td>55%</td>
<td>59%</td>
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Figure 9. Fall-to-Fall retention rates for first-time, award-seeking students at LWTech.

Completion Rates

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<td>37%</td>
<td>38%</td>
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<tr>
<td>2017</td>
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<td>2018</td>
<td>39%</td>
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<td>35%</td>
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<tr>
<td>2019</td>
<td>39%</td>
<td>32%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Figure 10. 3-year completion rates for first-time, award-seeking students at LWTech.
Appendix E: Disaggregated Student Data

Figure 11. 4-year completion rates for first-time, award-seeking students at LWTech.

Post-College Employment

Figure 12. 4-year employment rate and earning for first-time, award-seeking students that earned a degree/certificate at LWTech.
Appendix E: Disaggregated Student Data

Gender

Enrollment

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<th>Male</th>
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<tbody>
<tr>
<td>2014</td>
<td>4,101</td>
<td>2,816</td>
<td>22</td>
</tr>
<tr>
<td>2015</td>
<td>3,915</td>
<td>2,655</td>
<td>27</td>
</tr>
<tr>
<td>2016</td>
<td>3,951</td>
<td>2,613</td>
<td>22</td>
</tr>
<tr>
<td>2017</td>
<td>3,944</td>
<td>2,589</td>
<td>27</td>
</tr>
<tr>
<td>2018</td>
<td>3,913</td>
<td>2,425</td>
<td>22</td>
</tr>
<tr>
<td>2019</td>
<td>3,761</td>
<td>2,177</td>
<td>27</td>
</tr>
<tr>
<td>2020</td>
<td>3,225</td>
<td>1,948</td>
<td>22</td>
</tr>
<tr>
<td>2021</td>
<td>3,048</td>
<td>1,983</td>
<td>23</td>
</tr>
</tbody>
</table>

Figure 13. Enrollment (headcount) for all students at LWTech by year.

Persistence Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Female</th>
<th>Male</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>82%</td>
<td>79%</td>
<td>82%</td>
</tr>
<tr>
<td>2017</td>
<td>78%</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>2018</td>
<td>80%</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>2019</td>
<td>77%</td>
<td>80%</td>
<td>81%</td>
</tr>
</tbody>
</table>

Figure 14. Fall-to-Winter persistence rates for first-time, award-seeking students at LWTech.
Appendix E: Disaggregated Student Data

Retention Rates

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>57%</td>
<td>53%</td>
<td>50%</td>
<td>55%</td>
<td>52%</td>
</tr>
<tr>
<td>Male</td>
<td>51%</td>
<td>50%</td>
<td>56%</td>
<td>56%</td>
<td>56%</td>
</tr>
<tr>
<td>Unknown</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

*Figure 15. Fall-to-Fall retention rates for first-time, award-seeking students at LWTech.*

Completion Rates

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>41%</td>
<td>45%</td>
<td>39%</td>
<td>44%</td>
</tr>
<tr>
<td>Male</td>
<td>33%</td>
<td>30%</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 16. 3-year completion rates for first-time, award-seeking students at LWTech.*
Appendix E: Disaggregated Student Data

Figure 17. 4-year completion rates for first-time, award-seeking students at LWTech.

Figure 18. 4-year employment rate and earning for first-time, award-seeking students that earned a degree/certificate at LWTech.
## Appendix E: Disaggregated Student Data

### Age

#### Enrollment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>821</td>
<td>777</td>
<td>844</td>
<td>903</td>
<td>916</td>
<td>889</td>
<td>869</td>
<td>843</td>
</tr>
<tr>
<td>20-24</td>
<td>1,375</td>
<td>1,301</td>
<td>1,299</td>
<td>1,260</td>
<td>1,242</td>
<td>1,180</td>
<td>1,070</td>
<td>1,032</td>
</tr>
<tr>
<td>25-29</td>
<td>1,096</td>
<td>966</td>
<td>991</td>
<td>931</td>
<td>941</td>
<td>894</td>
<td>786</td>
<td>668</td>
</tr>
<tr>
<td>30-39</td>
<td>1,829</td>
<td>1,853</td>
<td>1,800</td>
<td>1,756</td>
<td>1,721</td>
<td>1,579</td>
<td>1,293</td>
<td>1,325</td>
</tr>
<tr>
<td>40+</td>
<td>1,676</td>
<td>1,484</td>
<td>1,465</td>
<td>1,498</td>
<td>1,390</td>
<td>1,245</td>
<td>1,015</td>
<td>1,141</td>
</tr>
</tbody>
</table>

*Figure 19. Enrollment (headcount) for all students at LWTech by year.*

### Persistence Rates

<table>
<thead>
<tr>
<th>Age Range</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>85%</td>
<td>78%</td>
<td>87%</td>
<td>84%</td>
<td>87%</td>
<td>85%</td>
</tr>
<tr>
<td>20-24</td>
<td>85%</td>
<td>79%</td>
<td>81%</td>
<td>81%</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>25-29</td>
<td>83%</td>
<td>84%</td>
<td>75%</td>
<td>82%</td>
<td>84%</td>
<td>70%</td>
</tr>
<tr>
<td>30-39</td>
<td>71%</td>
<td>83%</td>
<td>76%</td>
<td>74%</td>
<td>79%</td>
<td>72%</td>
</tr>
<tr>
<td>40+</td>
<td>75%</td>
<td>72%</td>
<td>81%</td>
<td>70%</td>
<td>81%</td>
<td>73%</td>
</tr>
</tbody>
</table>

*Figure 20. Fall-to-Winter persistence rates for first-time, award-seeking students at LWTech.*
Appendix E: Disaggregated Student Data

### Retention Rates

<table>
<thead>
<tr>
<th>Duration</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>64%</td>
<td>53%</td>
<td>59%</td>
<td>63%</td>
<td>61%</td>
</tr>
<tr>
<td>20-24</td>
<td>55%</td>
<td>53%</td>
<td>53%</td>
<td>59%</td>
<td>55%</td>
</tr>
<tr>
<td>25-29</td>
<td>54%</td>
<td>63%</td>
<td>50%</td>
<td>54%</td>
<td>52%</td>
</tr>
<tr>
<td>30-39</td>
<td>51%</td>
<td>49%</td>
<td>53%</td>
<td>53%</td>
<td>51%</td>
</tr>
<tr>
<td>40+</td>
<td>44%</td>
<td>41%</td>
<td>43%</td>
<td>43%</td>
<td>44%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Reported</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 21. Fall-to-Fall retention rates for first-time, award-seeking students at LWTech.*

### Completion Rates

<table>
<thead>
<tr>
<th>Duration</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>26%</td>
<td>35%</td>
<td>26%</td>
<td>32%</td>
</tr>
<tr>
<td>20-24</td>
<td>34%</td>
<td>36%</td>
<td>32%</td>
<td>38%</td>
</tr>
<tr>
<td>25-29</td>
<td>36%</td>
<td>51%</td>
<td>35%</td>
<td>38%</td>
</tr>
<tr>
<td>30-39</td>
<td>40%</td>
<td>39%</td>
<td>41%</td>
<td>42%</td>
</tr>
<tr>
<td>40+</td>
<td>47%</td>
<td>39%</td>
<td>37%</td>
<td>41%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Reported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 22. 3-year completion rates for first-time, award-seeking students at LWTech.*
## Appendix E: Disaggregated Student Data

### Figure 23. 4-year completion rates for first-time, award-seeking students at LWTech.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>38%</td>
<td>33%</td>
<td>39%</td>
<td>30%</td>
</tr>
<tr>
<td>20-24</td>
<td>41%</td>
<td>39%</td>
<td>40%</td>
<td>36%</td>
</tr>
<tr>
<td>25-29</td>
<td>39%</td>
<td>40%</td>
<td>43%</td>
<td>38%</td>
</tr>
<tr>
<td>30-39</td>
<td>41%</td>
<td>44%</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>40+</td>
<td>46%</td>
<td>50%</td>
<td>41%</td>
<td>39%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Not Reported</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Post-College Employment

### Figure 24. 4-year employment rate and earning for first-time, award-seeking students that earned a degree/certificate at LWTech.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>78k</td>
<td>78k</td>
<td>81k</td>
<td>66k</td>
</tr>
<tr>
<td></td>
<td>$34k</td>
<td>$38k</td>
<td>$39k</td>
<td>$36k</td>
</tr>
<tr>
<td>20-24</td>
<td>81%</td>
<td>87%</td>
<td>79%</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>$45k</td>
<td>$49k</td>
<td>$51k</td>
<td>$41k</td>
</tr>
<tr>
<td>25-29</td>
<td>94%</td>
<td>87%</td>
<td>77%</td>
<td>83%</td>
</tr>
<tr>
<td></td>
<td>$52k</td>
<td>$54k</td>
<td>$62k</td>
<td>$54k</td>
</tr>
<tr>
<td>30-39</td>
<td>76%</td>
<td>78%</td>
<td>79%</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>$48k</td>
<td>$51k</td>
<td>$46k</td>
<td>$47k</td>
</tr>
<tr>
<td>40+</td>
<td>71%</td>
<td>70%</td>
<td>71%</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>$49k</td>
<td>$37k</td>
<td>$46k</td>
<td>$42k</td>
</tr>
</tbody>
</table>
Appendix E: Disaggregated Student Data

Need-Based Aid (Pell Status)

![Graph showing enrollment by year with years 2014 to 2021.](image)

**Figure 25.** Enrollment (headcount) for all students at LWTech by year.

Persistence Rates

![Graph showing persistence rates by year with years 2016 to 2021.](image)

**Figure 26.** Fall-to-Winter persistence rates for first-time, award-seeking students at LWTech.

Retention Rates

![Graph showing retention rates by year with years 2016 to 2020.](image)

**Figure 27.** Fall-to-Fall retention rates for first-time, award-seeking students at LWTech.
Appendix E: Disaggregated Student Data

**Completion Rates**

<table>
<thead>
<tr>
<th>Did Not Receive Need-Based Aid</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>37%</td>
<td>37%</td>
<td>34%</td>
<td>39%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Received Need-Based Aid</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38%</td>
<td>39%</td>
<td>35%</td>
<td>35%</td>
</tr>
</tbody>
</table>

*Figure 28. 3-year completion rates for first-time, award-seeking students at LWTech.*

<table>
<thead>
<tr>
<th>Did Not Receive Need-Based Aid</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>41%</td>
<td>42%</td>
<td>40%</td>
<td>37%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Received Need-Based Aid</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42%</td>
<td>40%</td>
<td>42%</td>
<td>38%</td>
</tr>
</tbody>
</table>

*Figure 29. 4-year completion rates for first-time, award-seeking students at LWTech.*

**Post-College Employment**

<table>
<thead>
<tr>
<th>Did Not Receive Need-Based Aid</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$47,000</td>
<td>$49,000</td>
<td>$49,000</td>
<td>$45,000</td>
</tr>
<tr>
<td></td>
<td>77%</td>
<td>81%</td>
<td>75%</td>
<td>73%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Received Need-Based Aid</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$43,000</td>
<td>$41,000</td>
<td>$43,000</td>
<td>$42,000</td>
</tr>
<tr>
<td></td>
<td>80%</td>
<td>79%</td>
<td>84%</td>
<td>77%</td>
</tr>
</tbody>
</table>

*Figure 30. 4-year employment rate and earning for first-time, award-seeking students that earned a degree/certificate at LWTech.*
LAKE WASHINGTON INSTITUTE OF TECHNOLOGY

Program Viability Report

Program: Fitness Specialist
Program Viability Analysis
Fitness Specialist/Personal Trainer
Guiding Questions:

1. **Is enrollment adequate?**

   No, the program has been underenrolled for 5+ years. Enrollment in the program has been consistently going down for the past 5+ years. Students completing the associate’s degree and the certificate are also very low. Please refer to the two tables on enrollment and program completion.
   
   a. The established enrollment target determined by the college is 2 cohorts of 24 students each, totaling to 48 students. If all students completed the minimum of 67 credits for the program, it would be calculated to 71.47 FTEs.
   
   b. The Fitness program has not reached this enrollment target for past 5+ years.

<table>
<thead>
<tr>
<th>Entering Cohort</th>
<th>AAS</th>
<th>Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 Spring</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2016 Fall</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>2017 Spring</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>2017 Fall</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>2018 Spring</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>2018 Fall</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>2019 Spring</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>2019 Fall</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>2020 Spring</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2020 Fall</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Completions</th>
<th>AAS</th>
<th>Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2016-17</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2017-18</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2018-19</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2019-20</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2020-2021</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
2. Is the student to faculty ratio below 10:1? Or is it below the ration recommended for a particular program by the Dean or Vice President of Instruction, if one exists?

Student to faculty ratio is below 10:1 due to low enrollment.

3. Does the program meet industry standards?  
   Are the industry-validated competencies being successfully met by program graduates? Yes

   There is no formal recognized certification required to obtain employment as a Fitness trainer. According to the Federal Bureau of Labor Statistics (BLS), the typical level of education that most workers need to enter this occupation is: **High school diploma or equivalent**. Additional training, experience, licenses or credentials may be required. Learn more at BLS.

   LWTech offers a certificate of proficiency (52 credits) and an Associate Degree (AAS/AAS-T- 90 credits), not too many students complete them as they are ready for employment without these credentials.

4. Are there sufficient employment opportunities for program graduates, and are graduates obtaining employment in the field? The job market does not require a college degree.

Requirements for local jobs, currently advertised:

<table>
<thead>
<tr>
<th>No education No certification</th>
<th>Certification only (no education)</th>
<th>High school diploma/GED (no certification)</th>
<th>High school diploma/GED and certification</th>
<th>College degree or certification</th>
<th>Associate degree and certification</th>
<th>Bachelor's degree and certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2 Fitness</td>
<td>Ageility</td>
<td>LA Fitness</td>
<td>Anytime Fitness</td>
<td>Crunch Fitness</td>
<td>Gold's Gym</td>
<td></td>
</tr>
<tr>
<td>ZenRock Fitness</td>
<td>F45 NW Fitness on Go</td>
<td>Planet Fitness</td>
<td>Fitness Belltown</td>
<td>Fitness Eastlake</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Optimum</td>
<td>West Sea Health</td>
<td>Strength bStrong</td>
<td>Perf.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SasquatchStrength</td>
<td></td>
<td>Emerald City Athletics</td>
<td>Edge Pers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Snap Fitness</td>
<td></td>
<td>Life Time NW Fitness Project</td>
<td>Train Fitness</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stretchlab</td>
<td></td>
<td>OsteoStrong Pursuit</td>
<td>Interntl Fitness</td>
<td></td>
<td></td>
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<td></td>
<td>Transform 180</td>
<td></td>
<td>Fitness Svetness</td>
<td>Together</td>
<td></td>
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<tr>
<td></td>
<td>Untamed Fitness</td>
<td></td>
<td></td>
<td>Harbor Square</td>
<td></td>
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<tr>
<td></td>
<td>YMCA Sno Co.</td>
<td></td>
<td></td>
<td>Pro Club</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Title Boxing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Is the supply and demand gap in industry and from regional colleges adequate to support the program’s graduates obtaining employment in the field?

**Employment trends**

*Average annual growth rate (2018-2028)*

- WA State: 1.6%
- Seattle-King County: 1.8%
- Snohomish County: 1.9%

*Estimated employment (2018)*

- WA State: 12,465
- Seattle-King County: 5,060
- Snohomish County: 1,091

*Average annual total openings (2018-2028)*

- WA State: 5,723
- Seattle-King County: 2,353
- Snohomish County: 525


6. Do entry-level wages exceed minimum wage?

Washington’s mean wage is $26.80. The average rate that trainers charge in the greater Seattle area is $75 an hour. While that is before taxes in most cases for independent contractors, local athletic clubs also charge very similar rates and trainers take home ranges for example from $30 a session to $55 a session. This is also for 1-on-1 sessions, small group rates and training packages can make this vary.

Yes, but not by a huge margin
The average hourly wage is $20/hr.

**Pay**

*Average annual salary*

- WA State: $55,788
- Seattle-King County: $60,582
- Snohomish County: $72,620

*Average hourly wage*

- WA State: $26.82
Seattle-King County: $29.13
Snohomish County: $34.91

7. **Are there career advancement opportunities available for those graduates who perform successfully on the job?**

Yes, some advancement opportunities exist. Those graduated with an associate’s degree can further their education and obtain a bachelor’s degree.

Our program is one of the fastest growing industries and one of the top 5 to not be replaced by automation. Our students pursue many different aspects of our industry. Entrepreneurship has been a big component of our program and our students endeavors.

8. **Is the program advisory committee actively involved and supportive of the program?**

Yes, the advisory committee is actively involved in the growth and development of the program.

9. **Is the program cost-effective/economically supportable?**

No, for the last few years the program has had annual deficits due to low enrollment and retention.

10. **Other factors that may be determined during the process that may impact program viability**

**Discussion questions that came up during the taskforce meeting:**

a. **Can a name change of the program attract more students?**

For example- Health and Fitness Technician or Kinesiology/Exercise Science. Unfortunately, a name change is an extensive process that would not be completed before fall.

b. **Could adapting to different teaching modalities help attract more students to the program?**

The program is currently being offered in an hybrid format due to COVID limitations. Also, the program has collaborated with a local software company and created a Fitness App for the students to use in class. If the hybrid teaching format along with the Fitness App is proved successful, the program plans to use this format in fall and onwards. Some classes could also potentially be online as well.

c. **Are the program equipment out of date/ need changing or servicing?**
The Fitness equipment has not been upgraded for many years and would need to be upgraded if funding is available.

d. Has the Industry demand for the Fitness program graduates changed over the years?

Our college data shows that our program is unable to attract good enrollment and those who start the program, very few of them complete and receive a certificate or a degree.

e. Has the program not changed or been modified with the changing industry hiring trends?

Our program has worked with industry to help guide our students to the certifications that our industry prefers (NSCA, ACSM, NASM and ACE). Our students are wanted by the industry. We pivoted with the changing times of covid to start with. Allen and the advisory committee adjusted the courses and worked with Sally to streamline the program to better suit the industry and the trends of the industry. We reduced credits and reordered the courses as well as, also focused on the classes that we offered as tech-electives and narrowed the number of classes offered.
LAKE WASHINGTON INSTITUTE
OF TECHNOLOGY

Program Viability Report

Program: Culinary Arts
Program Viability Analysis

All programs should be continually reviewed for their effectiveness in meeting the training needs of industry, as well as in fulfilling the mission of the college. Programs failing to meet these needs should be subject to review for viability. The outcome of the review may involve program revision or elimination. Many factors are considered during this process:

1. Each program has an established average enrollment number that is determined by the college, in collaboration with the faculty, program director, and advisory committee, following analysis of the program curriculum needs: facility and equipment availability, safety factors, and the optimal number of students that the instructor(s) can successfully manage at one time. Is this established average enrollment figure being met? The established average enrollment is listed on the State Board’s inventory of approved professional-technical programs for the college as “maximum enrollment.”

Enrollment is determined to be inadequate when the program’s average enrollment is 75 percent or less of the established average enrollment figure. A review of the program should be triggered at any point in time that the enrollment dips below the 75 percent standard. During the review, up to three years of enrollment figures may be analyzed.

To answer the questions of section one, questions a) Is enrollment adequate? and b) Is there a long-term trend of declining or persistently low enrollment? Data from Tableau was gathered and provided in a visual representation in Figure 1 to answer question b. The X-axis provides the markers in the data at each quarter of each academic year. The Y-axis provides the number of enrolled students by headcount at each of the marker points.

The headcount enrollment numbers between 2016-2021 shows a long-term persistent trend line decline in the program with 54 students in Spring 2016 and the current number of 21 students enrolled in Spring 2021. The mathematical prediction of the trend line shows continued decline in enrollment for the program, although the Spring 2021 total is due to the program teaching out the current students in the program.
To understand if enrollment is adequate in the program to answer question “a”, data was gathered from Tableau and various college data sources. A financial calculation based on the breakeven point of using faculty salaries and benefits, program costs incurred by the college, program attrition and finally tuition received from students and the State of Washington will assist in providing the answer if the enrollment is adequate in the Culinary program.

To begin, Figure 2 is a histogram chart that conveys the Annual Full Time Equivalent (AFTE) that the Culinary program accumulated by each academic year from 2015-2021. This charts data was obtained from the Office of Instructions 2020-2021 FTE Targets and Actuals by ADM unit spreadsheet accessed on 4/08/2021. The chart shows the Culinary programs production of AFTE by academic year to be the following; 2015-16 was 76.27, 2016-17 was 60.44, 2017-18 was 50.47, 2018-19 was 42.18, 2019-20 was 37.02 and 2020-21 is projected to be 23.91 by the end of Spring quarter.
The next pieces of data required to contribute to answering question “a” is the financial side or program costs, program student attrition, faculty salaries and costs, student and state tuition revenue. This calculation of how much enrollment is needed to start a cohort was recently provided to faculty in a transparent process so that the data was understood and how the “number” was determined to go forward with a program cohort.

In the breakeven spreadsheet, it has multiple sections which are then brought together in order to calculate the breakeven dollar amount of faculty’s salary and benefits with revenue received for delivering instruction. The sections are Salaries and Benefits, Program Attrition, Program Costs and then Program Revenue. The average student attrition in the college is 25% by the end of year one in a program cohort model. The Culinary program did not have attrition data that reflected a true cohort model and therefore could not be held to the programs current attrition rate that jumps around. To provide the benefit of the doubt just as it was for the Machining program breakeven calculations, the student attrition calculation of 20% was used in determining the total number of students needed to start a cohort if at the end of year one, the breakeven point of revenue occurred.

After calculating the revenues, costs, salaries and benefits to determine the total sum with these variables, the program would need to have 19 students enrolled to start a new cohort in Spring 2021. This may seem excessively high compared to other program breakeven points, however, this enrollment number level is
Appendix F: Program Viability Reports

due to the program only offering 12 credits worth of classes each quarter while the other Prof-Tech programs are providing 15-16 credits per quarter. Unfortunately, the program was only able to enroll 7 students for the Spring 2021 cohort start and therefore the cohort was cancelled.

Section one conclusion finds that the Culinary program has a long-term trend of declining or persistently low enrollment and that the AFTE and enrollment that are generated in the program is not adequate and not able to even start a current cohort for Spring 2021.

2. Is the student to faculty ratio at or below 10:1? Or, is it below the ratio recommended for a particular program by the Dean or Vice President of Instruction, if one exists?

In section one, it was determined that the program faculty to student ratio needs to be at 19:1 to start a cohort in order to breakeven with 15 by the end of the first year due to student attrition and or loss of AFTE revenue from students and state tuition because of low enrollment. Although the program has shed a tenured faculty to provide a financially healthier program and a lower student to faculty ratio, currently the program has a student to faculty ratio of 7.5:1 for Spring 2021 quarter due to teaching out the final remaining students in the program. Due to this teach out scenario, the program has reduced to one tenured faculty for subsequent quarters beyond Spring 2021 and if the program viability process and the VPI determines that the program is to continue, the student to faculty ratio will be improved than what currently exists.

3. Does the program meet industry standards? Are the industry-validated competencies being successfully met by program graduates? If industry certification/formal recognition exists, has the program achieved such?

The Culinary industry has many organizations trying to improve the professionalism of industry workers. One such group is the American Culinary Federation (ACF) who has a certification process for current and initial Chefs. They state; “For over 45 years, the American Culinary Federation has been the premier certifying body for cooks and chefs in America. The ACF Certification program offers 15 certification levels to make the chef a more valuable candidate for hiring and promotion -- which can help increase his or her salary.
Culinarians achieve certification based on education, experience, and successful completion of written and practical exams. The ACF’s certification program is the only culinary program with stackable credentials and is recognized throughout the industry as the standard for excellence in professional skills and knowledge.”

Many discussions with Culinary employers has determined they do not require a credential to work in the industry, however, the knowledge and experience gained in the program accreditation standards does assist graduating students to get a job beyond the starting position of a dishwasher. The Culinary program has always provided a program to the accreditation level of the American Culinary Federation standards. Recently, the program faculty have reviewed the “value” to students by having the program accredited by the ACF versus incurring the costs that exceeds $10,000+ for having the program accredited when employers are not requiring that employees attend such a program to obtain employment. This review has determined that the Culinary program will not seek recertification with the ACF, thereby reducing the costs to run the program with a certification that employers do not require. The Culinary program will still adhere to the standards of the ACF, it just won’t seek formal accreditation by this external organization.

4. Are there sufficient employment opportunities for program graduates, and are graduates obtaining employment in the field?

The current employment opportunities for students has declined in the last year due to the COVID-19 pandemic and the CDC guidelines that have restricted restaurants in providing food service as has been in previous years. This statement was devised from the multiple news articles that conveyed the governor’s mandates and local county health authorities over the last year. Other input is from the program faculty stating that employment opportunities have gotten scarce in the last 12 months.

Even though the pandemic has constrained this industry and the program, the industry and program has endured and found creative ways to continue doing business and providing education. This may be the reason along with the recent CDC guidelines that project societal openings for June 30th that the Employment Security Department (ESD) projected in Table 1, which are positive in the 2018-2023 and 2023-2028 projections of...
1.85% for SEA-KING to 9.54% depending on the SOC code being reviewed. The answer to this sections questions is that the projected employment opportunities for graduates, will be sufficient in the coming years.

**Table 1. ESD Seattle-Tacoma-Bellevue Culinary Employment Projections**

<table>
<thead>
<tr>
<th>SOC code</th>
<th>Occupational title</th>
<th>Estimated employment 2018</th>
<th>Estimated employment 2023</th>
<th>Estimated employment 2028</th>
<th>Average annual growth rate 2018-2023</th>
<th>Average annual growth rate 2023-2028</th>
<th>Average annual opening due to growth 2018-2023</th>
<th>Average annual opening due to growth 2023-2028</th>
<th>Average annual total openings 2018-2023</th>
<th>Average annual total openings 2023-2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-1011</td>
<td>Chefs and Head Cooks</td>
<td>811</td>
<td>889</td>
<td>966</td>
<td>1.85%</td>
<td>1.68%</td>
<td>16</td>
<td>15</td>
<td>365</td>
<td>396</td>
</tr>
<tr>
<td>35-2000</td>
<td>Cooks and Food Preparation Workers</td>
<td>27,268</td>
<td>29,920</td>
<td>32,391</td>
<td>1.87%</td>
<td>1.60%</td>
<td>530</td>
<td>495</td>
<td>12,447</td>
<td>13,491</td>
</tr>
<tr>
<td>35-2012</td>
<td>Cooks, Institution and Cafeteria</td>
<td>2,779</td>
<td>3,147</td>
<td>3,373</td>
<td>2.52%</td>
<td>1.40%</td>
<td>74</td>
<td>45</td>
<td>978</td>
<td>1,039</td>
</tr>
<tr>
<td>35-2013</td>
<td>Cooks, Private Household</td>
<td>130</td>
<td>205</td>
<td>205</td>
<td>9.54%</td>
<td>0.00%</td>
<td>15</td>
<td>0</td>
<td>95</td>
<td>97</td>
</tr>
<tr>
<td>35-2014</td>
<td>Cooks, Restaurant</td>
<td>13,520</td>
<td>15,006</td>
<td>16,630</td>
<td>2.11%</td>
<td>2.08%</td>
<td>297</td>
<td>325</td>
<td>6,668</td>
<td>7,390</td>
</tr>
<tr>
<td>35-2015</td>
<td>Cooks, Short Order</td>
<td>1,188</td>
<td>1,303</td>
<td>1,428</td>
<td>1.87%</td>
<td>1.85%</td>
<td>23</td>
<td>25</td>
<td>593</td>
<td>650</td>
</tr>
<tr>
<td>35-2019</td>
<td>Cooks, All Other</td>
<td>56</td>
<td>88</td>
<td>91</td>
<td>9.46%</td>
<td>0.67%</td>
<td>6</td>
<td>1</td>
<td>35</td>
<td>37</td>
</tr>
</tbody>
</table>

5. Is the supply and demand gap in industry and from regional colleges adequate to support the program’s graduates obtaining employment in the field?

Data in section four of this analysis infers that there are jobs available to Culinary program graduates, and the demand gap will widen. This projection is based on occurrences prior to the pandemic in which multiple Culinary programs have closed in the previous years. An example is the Art Institute of Seattle closed just prior to the pandemic which had a prominent place in the Culinary education arena in the Puget Sound region that provides employees to the food service industry. This closure of such a prominent Culinary program has provided a gap between education entities training employees for the industry.
6. Do entry level wages exceed 120% of minimum wage?

Yes. Based on Table 2 of the Employment Security Departments (ESD) analysis, the typical wages are $17.74-32.70/hour.

Table 2. ESD Seattle-Tacoma-Bellevue Wage Data

<table>
<thead>
<tr>
<th>SOC code</th>
<th>Seattle-Tacoma-Bellevue WA MSA occupation title</th>
<th>Estimated employment</th>
<th>Average wage</th>
<th>25th percentile</th>
<th>50th percentile</th>
<th>75th percentile</th>
<th>Annual wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-1011</td>
<td>Chefs and Head Cooks</td>
<td>1,048</td>
<td>$32.70</td>
<td>$24.04</td>
<td>$29.69</td>
<td>$37.18</td>
<td>$68,025</td>
</tr>
<tr>
<td>35-2019</td>
<td>Cooks, All Other</td>
<td></td>
<td>$25.02</td>
<td>$19.88</td>
<td>$23.96</td>
<td>$29.92</td>
<td>$52,049</td>
</tr>
<tr>
<td>35-2014</td>
<td>Cooks, Restaurant</td>
<td>19,899</td>
<td>$17.74</td>
<td>$16.04</td>
<td>$17.70</td>
<td>$19.33</td>
<td>$36,887</td>
</tr>
<tr>
<td>35-2015</td>
<td>Cooks, Short Order</td>
<td>1,416</td>
<td>$18.31</td>
<td>$16.02</td>
<td>$18.12</td>
<td>$20.93</td>
<td>$38,102</td>
</tr>
</tbody>
</table>

7. Are there career advancement opportunities available for those graduates who perform successfully on the job?

Yes

8. Is the program advisory committee positively affecting and supporting the program?

Yes. The program has always had a working and viable advisory committee. Recently the committee retired long standing members to give the committee fresh voices and to reinvigorate the work of the committee. The faculty have also worked with new employers such as Google who have high end chefs in their corporate cafeterias to provide a voice that has not always been heard in the programs advisory committee.

9. Is the program cost-effective/economically supportable?

As it is true that the 1K10 program budget has a -$255,337.33 deficit, a lot of this cost associated with the program can be contributed to the program being tied to the Baking program and the major influencer was the cafeteria operations that used the programs food product to subsidize its operations. Since Fall 2020 the
Appendix F: Program Viability Reports

Baking program split from the Culinary program and therefore wont incur the costs of another programs costs. Additionally, the cafeteria operations have been closed and will not affect the Culinary programs financial status.

In the last few years the program faculty have been working diligently to be financially healthy in the program. To provide an example, recently the budgetary numbers for April came through and to date for the 2020-21 academic year, the program budget of $10,010 has generated $19,189.66 and they have spent $15,445.44 to provide instruction. This positive difference between lab fees and program purchases of consumables to provide instruction shows that the program can be financially supportable.

Another example of how the program can be financially supportable was mentioned previously in which the program has reduced down to one full-time faculty member. To go to the next level, the program faculty have also been working to change the program to provide 15 credits of instruction each quarter instead of the 12 credits it used to provide. With this move and by adding classes such as “Catering” will provide further skills for students while substantially improving the financial health of the program. With this credit load change, the program would go from 19 students to start a cohort down to 15 students with 12 students only needed to breakeven. The curriculum is also being rearranged to be able to be delivered by one full-time faculty instead of the previous three full-time faculties that were running a cohort through the educational pathway.

However, among the financial picture will be data from the Finance office. There is a large amount a spending in the near term that might be spent more productively on some other program.

1) $218,000 on front line cooking equipment replacement. The funds for the original Phase 2 were reallocated to the science/physics lab. Then recently the legislature cut the colleges minor work budget by 40% (the Dunshee Effect)

2) $230,000 in hood fan upgrades that is in our Facility Repair allocation is needed.

3) $56,000 in salary and benefits annually for 1 FT custodian who only does Culinary and the west wedge bathrooms and café area.
Appendix F: Program Viability Reports

4) $ Big Energy cost. The Culinary has 100% exhaust 24/7 because the pilot lights are left on.

a. The fans are running 24/7 and this pulls all the heat out of the area - Wasteful and contrary to the colleges green goals.

b. This is not metered so it is impossible to quantify.

c. It can be mediated if we turn off the gas at the end of the day and have an IST(?) light them at the beginning of the day.

d. The breakeven shortfall is the other meaningful value.

10. Other factors that may be determined during the process that may impact program viability.

As mentioned previously, COVID-19 has had a devastating impact on the restaurant and hospitality industry. However, we are beginning to see a literal rebirth of industry with numerous employers actively seeking workers, and in some cases even going so far as to offer significant hiring bonuses for restaurant employees. A cursory review of job posting websites such as poached.com show employers offering $20+/hour for cooks with hiring bonuses of up to $20,000 for trained chefs. The industry is clearly in dire need of employees trained in the culinary arts.

The current demand for employees in the hospitality industry can be a double-edged sword with potential students opting to forego a formal education and instead learn on the job. In order to attract students who may be on the fence as to whether to enroll in classes or immediately enter industry, the Culinary Arts program will focus on marketing the benefits of formal education such as faster promotion prospects, better well-rounded training, and overall personal development. Working within group dynamics, building interpersonal and leadership skills, and instilling pride in product and profession are all aspects of the program which may not be readily available in on the job training.

The recent structuring of the Culinary Arts program is designed to meet the future needs of the industry and get students out to the workforce quicker without sacrificing technical or academic knowledge. The
Appendix F: Program Viability Reports

The program has been reduced to five (5) quarters with students taking at least 15 program credits per quarter. The increased class load per quarter will not only allow students to complete their degree three (3) months earlier, but will also allow the program to be financially supportable with less students. Further, despite the earlier completion, no classes have been removed from the curriculum and classes such as Restaurant Operations and Catering have been modified or added to further enhance student learning.

The program has also been restructured to provide a two (2) quarter Certificate of Completion for those students who are solely interested in getting the basic skills needed to be a productive employee. The two (2) quarter certificate will provide students basic culinary knowledge along with knife and cooking techniques to allow them to enter the industry with a solid foundation upon which to build their skills. A three (3) quarter Certificate of Proficiency may also be developed in the future which would require students to successfully pass the Restaurant Operations class built upon developing and running the on-campus restaurant.

¹ https://www.acfchefs.org/ACF/Certify/AboutCertification/ACF/Certify/
Program: Machining Technology
Program Viability Analysis

All programs should be continually reviewed for their effectiveness in meeting the training needs of industry, as well as in fulfilling the mission of the college. Programs failing to meet these needs should be subject to review for viability. The outcome of the review may involve program revision or elimination. Many factors are considered during this process:

1. Is enrollment adequate? Is there a long-term trend of declining or persistently low enrollment? Each program has a designated annual FTE target that is determined by the college in collaboration with the faculty, program director, and advisory committee. Analysis of the program may include: curriculum needs, facility and equipment availability, safety factors, and the optimal number of students that the instructor(s) can successfully manage at one time. Is this designated annual FTE target being met?

To answer the questions of section one, questions a) Is enrollment adequate? and b) Is there a long-term trend of declining or persistently low enrollment? Data from Tableau was gathered and provided in a visual representation in Figure 1 to answer question b. The X-axis provides the markers in the data at each quarter of each academic year. The Y-axis provides the number of enrolled students by headcount at each of the marker points.

The headcount enrollment numbers between 2015-2021 shows a long-term persistent decline in the program with 70 students in Fall 2015 and the current number of 11 students enrolled in Winter 2021. The mathematical prediction of the trend line shows continued decline in enrollment for the program, although the Spring 2021 total is up by two due to the cohort being taught out.
Figure 1. Machining Program Enrollment 2015-2021

To understand if enrollment is adequate in the program to answer question “a”, data was gathered from Tableau and various college data sources. A financial calculation based on the breakeven point of using faculty salaries and benefits, program costs incurred by the college, program attrition and finally tuition received from students and the State of Washington will assist in providing the answer if the enrollment is adequate in the Machining program.

To begin, Figure 2 is a histogram chart that conveys the Annual Full Time Equivalent (AFTE) that the Machining program accumulated by each academic year from 2015-2021. This charts data was obtained from the Office of Instructions 2020-2021 FTE Targets and Actuals by ADM unit spreadsheet accessed on 2/08/2021. The chart shows the Machining programs production of AFTE by academic year to be the following; 2015-16 was 62.35, 2016-17 was 51.04, 2017-18 was 40.04, 2018-19 was 35.11, 2019-20 was 30.5 and 2020-21 is projected to be 12.59 by the end of Spring quarter dependent on student enrollment after advising day in Winter 2021 quarter.
The next piece of data required to contribute to answering question “a” is the financial side or program costs, program student attrition, faculty salaries and costs, Student and State tuition revenue. This calculation of how much enrollment is needed to start a cohort was recently provided to faculty in a transparent process so that the data was understood and how the “number” was determined to go forward.

In the spreadsheet, it has multiple sections which are then brought together in order to calculate the breakeven dollar amount. The sections are Salaries and Benefits, Program Attrition, Program Costs and then Program Revenue. The average student attrition in the college is 25% by the end of year one in a program cohort model. The Machining program did not have data that reflected a true cohort model and therefore could not be held to the programs current attrition rate that jumps around between the low of 16.2% (Program Review 2017-18) and the high of 47.1% (Program Review 2019-20) in student attrition for a starting cohort in the first three quarters. To provide the benefit of the doubt, the student attrition calculation of 20% was used in determining the total number of students needed to start a cohort if at the end of year one, the breakeven point of revenue occurred.

After calculating the salaries and benefits of two scenarios, scenario one: one faculty and scenario two: one faculty with one IST with a 20% attrition rate in both scenarios. The calculations determined that in scenario one, the program would need to have 15 students enrolled to start a new cohort in Fall 2020 and Winter
2021. It was also determined that in scenario two, the total number of students needed to start the cohort was 18 in Winter 2021. The program was only able to have 11 students enroll for Fall 2020 and 11 students for Winter 2021 and therefore a cohort did not begin.

Section one conclusion finds that the Machining program has a long-term trend of declining or persistently low enrollment and that the AFTE and enrollment that are generated in the program is not adequate to even start a current cohort for Fall 2020 and Winter 2021.

2. Is the student to faculty ratio at or below 10:1? Or, is it below the ratio recommended for a particular program by the Dean or Vice President of Instruction, if one exists?

In section one, it was determined that the program faculty to student ratio needs to be at 15:1 to start a cohort in order to breakeven by the end of the first year due to student attrition and or loss of AFTE revenue from student and state tuition. Currently the program has a student to faculty ratio of 11:1 for Winter quarter.

3. Does the program meet industry standards? Are the industry-validated competencies being successfully met by program graduates? If industry certification/formal recognition exists, has the program achieved such?

Conversations with local employers and questions to advisory committee members about whether the program meets industry standards and/or validated competencies has always produced an answer of yes. The program is well known to be a quality program within Puget Sound region.

The college employed a third-party research group (Hanover Research) that performed a qualitative interview analysis of Machinist employers. The employers verified that they do not require entry-level employees to have an associate degree in Machining. The employers conveyed that they hire individuals out of high school to create the workforce they need. The industry does not require certification and/or formal recognition for the program.

4. Are there sufficient employment opportunities for program graduates, and are graduates obtaining employment in the field?
The current employment opportunities for students has declined in the last year. This statement was devised from the multiple news articles that conveyed that Boeing was to lay off 11,000 workers by June 2021. Other input is from the program faculty stating that employment opportunities have gotten scarce in the last 6 months. This ripple effect to the surrounding sub-contracting Machinist shops will almost assuredly cause continued non-hiring practices for these employers. A third variable was learned from a Dean at Renton Technical College where he understood that Boeing had continued to have aircraft parts produced for the assembly lines even though the planes were not being constructed. This leads to a stockpiling of airplane parts and when the production lines come back up to their previous levels, the surrounding Machine shops will not be needed by Boeing and therefore the non-hiring policy will continue. This practice by Boeing has kept the subcontractors working during the pandemic, their plane groundings and plane assembly reductions, but it will produce a vacuum eventually when Boeing ceases to order parts. This may be the reason that the projections in Table 1 go up in the 2018-2023 projections of 1.08% for SEA-KING and 1.46% for SNO but they then slide down to .57% for SEA-KING and .36% for SNO on the 2023-2028 projections.

Looking at projections for employment of our graduating students in obtaining employment, the appendix resource where an analysis of Boeing ramp up conveys that it will be 3-5 years before that occurs. Looking at the Washington State Employment Security Department (ESD) projections shows that there are a few opportunities for students to gain employment. Table 1 provides the ESD projections from 2018-2028 that were produced in November of 2020. As it is hoped that ESD data would be factual and accurate, it has come to light that the methodology of the ESD calculations and the classification system that the Workforce Development Council uses to determine “in decline” occupations and “in demand” occupations is not transparent and should be weighed as such.

While the Dean attended Boeings Workforce Development meeting on February 24, 2021, Creed Tremaine from AJAC asked Boeing for leads on internship opportunities because AJAC was unable to place their apprentices into employment who have completed their training. Boeing conveyed that it had a hand full of opportunities coming, but would not provide any details beyond that statement.
5. Is the supply and demand gap in industry and from regional colleges adequate to support the program’s graduates obtaining employment in the field?

Research was performed to determine how many training sites offered Machining programs for the regions employers. Figure 3 provides a map of the Puget Sound Region and the seven current training sites that house Machining and/or CNC programs. Based off the data in Section 4 and the volume of training sites in Figure 3, it is inferred that the small gap in industry versus training program graduates obtaining employment would be an answer of no, there are too many training facilities producing graduates for the labor market demand projected by the ESD.

After attending Boeing Workforce Development meetings, the Dean found that Boeing is not looking at just the Central Puget Sound region to supply a skilled workforce for employment opportunities they have for Machinists and or other manufacturing related programs. They are looking at statewide training programs to provide skilled talent which then incorporates many more training programs (WA TR, Spokane CC, Bellingham Tech.) that can provide Boeing and the manufacturing sector with Machinists and CNC trained individuals.
6. Do entry level wages exceed 120% of minimum wage?

Yes. Typical wages are $18-20/hour.

7. Are there career advancement opportunities available for those graduates who perform successfully on the job?

Yes. Opportunities exist within companies and between companies. As there are opportunities within companies and between companies, it must be stated that it can take many years for a graduate to obtain a position where they will be using all the skills they trained for through the Machining AAS degree.

8. Is the program advisory committee positively affecting and supporting the program?

Yes

9. Is the program cost-effective/economically supportable?

Per previous section analyses, the program is not cost-effective or economically supportable based on the enrollment. Currently, the program has scaled back to one faculty from the two it previously had and it let
go of the Instructional Support Technician that assisted the program. Even through this reduction in force effort, the program attempted to run two cohorts in Fall 2020 and Winter 2021. Financially, the program requires that 15 students start a cohort in order to pay for a faculty’s salary through the first three quarters of a six quarter program. Section one described the process for obtaining the cost versus revenue calculation. Also, the Hanover Research Quantitative analysis specifically calls out in their analysis that no more financial investment should be provided to the Machining program. Currently as of February 2021, the Machining program has a $116,386.97 deficit.

10. Other factors that may be determined during the process that may impact program viability.

Research conducted and the current program curriculum do not fully reflect the scope of opportunities for those trained in CNC programming and manufacturing design and production. The field is currently evolving beyond the “Boeing Machinist” to include laser operation, plasma welding, and other roles in aerospace and the space industries, as well as boutique industries that are currently growing at a rapid pace (e.g., electronic bicycles). Updated curriculum as outlined below will better meet those needs and allow for continued evolution of the program.

During the Boeing Workforce Development meeting on February 24, 2021, a representative from Renton Technical College stated that they were currently developing a BAS in Manufacturing Engineering which closes the door on LWTech ever producing a future pathway related to the Engineering side of the manufacturing industry if that college implements this opportunity prior to LWTech.

Another factor affecting this programs viability is the lack of articulation agreements that allow surrounding high school district students to get credit while in K-12 and then applying those credits to the Machining program at LWTech. Seven articulation agreements for the Snohomish and Marysville districts and Sno-Isle Skill Center were presented to the program faculty in January of 2020 but no credit was provided by the faculty to institute an agreement.
Appendix F: Program Viability Reports

Machining Technology, AAS

90-95 CREDITS

Program Admission Dates: Fall, Winter, Spring (Fall recommended)

The Machining Technology Associate of Applied Science degree prepares students and professionals to meet the knowledge, skills, and educational requirements for both initial employment and advancement in machining technology and related fields that utilize CNC programming.

Machining Technology AAS graduates are prepared to:

- monitor runs of parts for quality
- recognize when parts are in and out of tolerance
- make adjustments to bring parts back into tolerance
- navigate CNC error codes
- replace broken or dull tools and resetting tool length offsets
- use cutter compensation at the machine
- apply basics of precision measurements
- set up fixtures, load programs onto machines, dry run programs, run first articles, and inspect first articles in order to get first part buy-offs and enter into production
- identify and set correct fixture, X, and Z offsets
- complete initial setting of tool length offsets
- set offsets for ID, OD, and groove/part-off tooling
- hand write and edit basic 2-axis G-code programs
- create original CNC programs using CAD/CAM software
- troubleshoot toolpaths, offsets, and error codes
- program, set up, and run various multi-axis processes including:
  - 2-axis lathe with axial and radial live tooling
  - 3-axis mill with 4th axis capability
  - turning center (machining center) with axial and radial live tooling, a Y axis, and a sub-spindle
  - 5-axis machine that is true 5 axis in a table-table format

Students also learn the basics of conversational set up and programming as a foundation for more advanced set up and programming skills, as well as CNC safety, blueprint reading, and geometric dimensioning and tolerancing (GD&T). The final quarter of the program expands students knowledge, skills, and abilities in a field related to their career pathways goals.

Lake Washington Institute of Technology does not offer every course each quarter. It is the student’s responsibility to consult the Class Schedule and work out an individual schedule with an advisor. Any developmental coursework a student may be required to complete may increase the program length.

Recommended Course Sequence

Quarter One (Fall)

- MACH 151 MasterCAM: Wireframe/Solids/Toolpaths 1 5 credits
- MACH 107 CNC Machining: Production and Inspection 5 credits
- MACH 109 Conversational Programming 5 credits
- ENGL/ENGL& English Course 5 credits

Quarter Two (Winter)

- MACH 153 MasterCAM: Wireframe/Solids/Toolpaths 2 5 credits
- MACH 117 CNC Machining: Milling Setup 5 credits
- MACH 119 CNC Machining: Milling Operation 5 credits
- MATH/MATH& Math Course 5 credits

Quarter Three (Spring)

- MACH 155 MasterCAM: Wireframe/Solids/Toolpaths 3 5 credits
Appendix F: Program Viability Reports

- MACH 137 CNC Machining: Turning Setup 5 credits
- MACH 139 CNC Machining: Turning Operation 5 credits
- PSYC&/SOC&/POLS&/HIST&/ECON& Social Science Course 5 credits

Quarter Four (Summer)
- MACH 205 Multi-Axis Programming 5 credits
- MACH 207 Multi-Axis Setup 5 credits
- MACH 209 Multi-Axis Operation 5 credits

Quarter Five (Fall)
- Humanities Course 5 credits
- Select one of the following concentrations:
  - Cooperative Work Experience
    - MACH 270 Seminar 2 credits
    - MACH 290 Field-Based Experience 8 credits
  - Welding
    - WELD 101 Oxy-Acetylene Cutting and Welding 6 credits
    - WELD 102 Shielded Metal Arc Welding 7 credits
  - Laser and Optical Technology
    - LASR 201 Fundamentals of Light and Lasers 5 credits
    - LASR 202 Precision Optical Systems: Quality Assurance, Metrology, and Alignment 6 credits
  - Business (as preparation for the BAS in AME)
    - ACCT& 201 Principles of Accounting I 5 credits
    - BUS& 101 Introduction to Business 5 credits
  - Design
    - ART 102 Design I 5 credits
    - Select one of the following courses:
      - DSGN 121 Vector Illustration 1 with Illustrator 5 credits
      - DSGN 122 Image Editing 1 with Photoshop 5 credits
      - DSGN 155 Introduction to User-Centered Design 5 credits
  - Mechanical Design Technology
    - ENGT 100 College Success - Mechanical Design 3 credits
    - ENGT 101 Tools and Techniques - Mechanical Design 3 credits
    - ENGT 102 Introduction to Design Theory - Mechanical Design 4 credits
    - ENGT 103 Projects and Professional Practice 5 credits
Machining Technology, Certificate of Proficiency

Program Admission Dates: Fall, Winter, Spring (Fall recommended)

The Machining Technology Certificate of Proficiency prepares students for setup machining positions in machining technology and related fields that utilize CNC programming. Students have a solid foundation in programming and set up of 2-axis turning and 3-axis milling processes. With this certificate, students are better prepared to advance within their field.

Machining Technology Certificate of Completion graduates are prepared to:

- monitor runs of parts for quality
- recognize when parts are in and out of tolerance
- make adjustments to bring parts back into tolerance
- navigate CNC error codes
- replace broken or dull tools and resetting tool length offsets
- use cutter compensation at the machine
- apply basics of precision measurements
- set up fixtures, load programs onto machines, dry run programs, run first articles, and inspect first articles in order to get first part buy-offs and enter into production
- identify and set correct fixture, X, and Z offsets
- complete initial setting of tool length offsets
- set offsets for ID, OD, and groove/part-off tooling
- hand write and edit basic 2-axis G-code programs
- create original CNC programs using CAD/CAM software
- troubleshoot toolpaths, offsets, and error codes
Appendix F: Program Viability Reports

Students also learn the basics of conversational set up and programming as a foundation for more advanced set up and programming skills, as well as CNC safety, blueprint reading, and geometric dimensioning and tolerancing (GD&T).

Lake Washington Institute of Technology does not offer every course each quarter. It is the student’s responsibility to consult the Class Schedule and work out an individual schedule with an advisor. Any developmental coursework a student may be required to complete may increase the program length.

Recommended Course Sequence

**Quarter One**
- MACH 151 MasterCAM: Wireframe/Solids/Toolpaths 1 **5 credits**
- MACH 107 CNC Machining: Production and Inspection **5 credits**
- MACH 109 Conversational Programming **5 credits**
- ENGL/ENGL& English Course **5 credits**

**Quarter Two**
- MACH 153 MasterCAM: Wireframe/Solids/Toolpaths 2 **5 credits**
- MACH 117 CNC Machining: Milling Setup **5 credits**
- MACH 119 CNC Machining: Milling Operation **5 credits**
- MATH/MATH& Math Course **5 credits**

**Quarter Three**
- MACH 155 MasterCAM: Wireframe/Solids/Toolpaths 3 **5 credits**
- MACH 137 CNC Machining: Turning Setup **5 credits**
- MACH 139 CNC Machining: Turning Operation **5 credits**
- PSYC&/SOC&/POLLS&/HIST&/ECON& Social Science Course **5 credits**

**CNC Production and Inspection, Certificate of Completion**

**15 CREDITS**

*Program Admission Dates: Fall*

The CNC Production and Inspection certificate prepares students for entry-level CNC operator positions in machining technology and related fields that utilize CNC programming. Students are prepared to:

- monitor runs of parts for quality
- recognize when parts are in and out of tolerance
- make adjustments to bring parts back into tolerance
- navigate CNC error codes
- replace broken or dull tools and resetting tool length offsets
- use cutter compensation at the machine
- apply basics of precision measurements

Students also learn the basics of conversational set up and programming as a foundation for more advanced set up and programming skills.

Lake Washington Institute of Technology does not offer every course each quarter. It is the student’s responsibility to consult the Class Schedule and work out an individual schedule with an advisor. Any developmental coursework a student may be required to complete may increase the program length.

**Required Courses**
- MasterCAM Course: Students must take the MasterCAM courses in sequence. If this is their first quarter, they will take the first course. If they completed any of the Machining Technology short certificates in prior quarters, they will take the next course in the sequence.
Appendix F: Program Viability Reports

- MACH 151 MasterCAM: Wireframe/Solids/Toolpaths 1 **5 credits** (First quarter students or students only completing this short certificate)
  - or
- MACH 153 MasterCAM: Wireframe/Solids/Toolpaths 2 **5 credits** (Second quarter students)
  - or
- MACH 155 MasterCAM: Wireframe/Solids/Toolpaths 3 **5 credits** (Third quarter students)

- MACH 107 CNC Machining: Production and Inspection **5 credits**
- MACH 109 Conversational Programming **5 credits**
Milling Setup and Operation, Certificate of Completion

15 CREDITS

Program Admission Dates: Winter

The Milling Setup and Operation certificate prepares students for entry-level setup machining positions in machining technology and related fields that utilize CNC programming. Students learn to apply the following knowledge and skills to 3-axis machining applications:

- set up fixtures, load programs onto machines, dry run programs, run first articles, and inspect first articles in order to get first part buy-offs and enter into production
- identify and set correct fixture offsets
- complete initial setting of tool length offsets
- create original CNC programs using CAD/CAM software
- troubleshoot toolpaths, offsets, and error codes

Students also learn CNC safety, blueprint reading, and geometric dimensioning and tolerancing (GD&T).

Lake Washington Institute of Technology does not offer every course each quarter. It is the student’s responsibility to consult the Class Schedule and work out an individual schedule with an advisor. Any developmental coursework a student may be required to complete may increase the program length.

Required Courses

- MasterCAM Course: Students must take the MasterCAM courses in sequence. If this is their first quarter, they will take the first course. If they completed any of the Machining Technology short certificates in prior quarters, they will take the next course in the sequence.
  - MACH 151 MasterCAM: Wireframe/Solids/Toolpaths 5 credits (First quarter students or students only completing this short certificate)
  - or
  - MACH 153 MasterCAM: Wireframe/Solids/Toolpaths 5 credits (Second quarter students)
  - or
  - MACH 155 MasterCAM: Wireframe/Solids/Toolpaths 5 credits (Third quarter students)
- MACH 117 CNC Machining: Milling Setup 5 credits
- MACH 119 CNC Machining: Milling Operation 5 credits
Appendix F: Program Viability Reports

Turning Setup and Operation, Certificate of Completion

15 CREDITS

Program Admission Dates: Spring

The Turning Setup and Operation certificate prepares students for entry-level setup machining positions in machining technology and related fields that utilize CNC programming. Students learn to apply the following knowledge and skills to 2-axis machining applications:

- set up fixtures, load programs onto machines, dry run programs, run first articles, and inspect first articles in order to get first part buy-offs and enter into production
- identify and set correct X and Z offsets
- set offsets for ID, OD, and groove/part-off tooling
- hand write and edit basic 2-axis G-code programs
- create original CNC programs using CAD/CAM software
- troubleshoot toolpaths, offsets, and error codes

Students also learn CNC safety, blueprint reading, and geometric dimensioning and tolerancing (GD&T).

Lake Washington Institute of Technology does not offer every course each quarter. It is the student’s responsibility to consult the Class Schedule and work out an individual schedule with an advisor. Any developmental coursework a student may be required to complete may increase the program length.

Required Courses

- MasterCAM Course: Students must take the MasterCAM courses in sequence. If this is their first quarter, they will take the first course. If they completed any of the Machining Technology short certificates in prior quarters, they will take the next course in the sequence.
  - MACH 151 MasterCAM: Wireframe/Solids/Toolpaths 1 5 credits (First quarter students or students only completing this short certificate)
    - or
  - MACH 153 MasterCAM: Wireframe/Solids/Toolpaths 2 5 credits (Second quarter students)
    - or
  - MACH 155 MasterCAM: Wireframe/Solids/Toolpaths 3 5 credits (Third quarter students)
- MACH 137 CNC Machining: Turning Setup, 5 credits
- MACH 139 CNC Machining: Turning Operation, 5 credits
Multi-Axis Programming, Setup, & Operation, Certificate of Completion

15 CREDITS

Program Admission Dates: Summer

The Multi-Axis Programming, Setup, and Operation certificate is designed for students and professionals to increase their knowledge and skills in machining technology and related fields that utilize CNC programming. Students learn to program, set up, and run various multi-axis processes including:

- 2-axis lathe with axial and radial live tooling
- 3-axis mill with 4th axis capability
- Turning center (machining center) with axial and radial live tooling, a Y axis, and a sub-spindle
- 5-axis machine that is true 5 axis in a table-table format

Lake Washington Institute of Technology does not offer every course each quarter. It is the student’s responsibility to consult the Class Schedule and work out an individual schedule with an advisor. Any developmental coursework a student may be required to complete may increase the program length.

Prerequisites

- Completion of the following Certificates of Completion or faculty permission
  - CNC Production and Inspection, Certificate of Completion
  - Milling Setup and Operation, Certificate of Completion
  - Turning Setup and Operation, Certificate of Completion

Required Courses

- MACH 205 Multi-Axis Programming 5 credits
- MACH 207 Multi-Axis Setup 5 credits
- MACH 209 Multi-Axis Operation 5 credits
1. Is enrollment adequate?

Each program has an established average enrollment number that is determined by the college, in collaboration with the faculty, program director, and advisory committee, following analysis of the program curriculum needs: facility and equipment availability, safety factors, and the optimal number of students that the instructor(s) can successfully manage at one time. Is this established average enrollment figure being met? The established average enrollment is listed on the State Board’s inventory of approved professional-technical programs for the college as “maximum enrollment.”

Enrollment is determined to be inadequate when the program’s average enrollment is 75 percent or less of the established average enrollment figure. A review of the program should be triggered at any point in time that the enrollment dips below the 75 percent standard. During the review, up to three years of enrollment figures may be analyzed.

2. Does the program meet industry standards?

Are the industry-validated competencies being successfully met by program graduates?

If industry certification/formal recognition exists, has the program achieved said certification/formal recognition?

3. Are there sufficient employment opportunities for program graduates, and are graduates obtaining employment in the field?

4. Do entry-level wages exceed minimum wage?

5. Are there career advancement opportunities available for those graduates who perform successfully on the job?

6. Is the program advisory committee actively involved and supportive of the program?

7. Is the program cost-effective/economically supportable?

8. Other factors that may be determined during the process that may impact program viability.

While enrollment is a key factor considered in the review process, all factors listed above are important considerations and any of them could be a determinant for program viability even though adequate enrollment may exist.
Program: Laser and Optical Technology
**Introduction**

The Program Viability process for Laser & Optical Technology was triggered in Winter quarter 2022 after enrollment was determined insufficient to start a new cohort. This was the second consecutive quarter enrollment was below a financially feasible level using a college formula to determine minimum enrollment levels for cohort-based programs. The Program Viability process is detailed in the faculty collective-bargained agreement (CBA) in Article 29 MOU K. As specified as task force was formed to produce this report.

**Task Force Members**

The Program Viability Taskforce conducting the viability analysis included the following members:

- Dr. Hany Roufael, Program Department Chair
- Dr. Mike Potter, Division Dean
- Vicki Chew, Dean of Instruction – Assessment and Curriculum Development
- Greg Bem, Interim President of the faculty union
- Neha Kardam, Faculty Peer from Division
- K Meyers, Advisory Committee member

**Meetings**

The task force held 3 meetings as required in the faculty CBA. The meeting dates were:

- February 28, 2022
- March 14, 2022
- March 21, 2022

All meetings were held on Zoom.

The first taskforce meeting, convened by the Dean, was dedicated to describing the viability analysis procedure and primary reasons for beginning that process, as well as the roles and expectations for those involved in the analysis. The second convening of the taskforce included the presentation of the initial results of the viability analysis to the team. The team asked questions, clarification, etc. The team determined the need for additional information. The third convening of the taskforce focused on discussion of the results and formulation of a recommendation for program continuance with revisions.

This report is scheduled to be presented to the Vice President of Instruction April 29, 2022.

**Program Viability Question Responses**

1. *Is enrollment adequate? Is there a long-term trend of declining or persistently low enrollment? Each program has a designated annual FTE target that is determined by the college in collaboration with the faculty, program director, and advisory committee. Analysis of the program may include curriculum needs, facility and equipment availability, safety factors, and the optimal number of students that the instructor(s) can successfully manage at one time. Is this designated annual FTE target being met?*
Summary of Program Enrollment and Academic Success

This enrollment chart shown in figure.1 includes all student; intent; race/ethnicity; gender; military status; work status; citizenship status; income status; running status; award seeking; and full-time/part-time.

![Enrollment Chart]

Figure.1: Program/Certification enrollment summary (2017 - 2019)

Analysis and comments regarding Enrollment and Academic Success

The overall program enrollment: as we see in chart above is low. Though, it can be noticed that, there is a significant 50% increase in spring 2019 compared to winter 2019 for example. Please, note that we have no data so far regarding students’ Persistence and Completion. Beyond the spring of 2019. A proposed new associate degree in lasers and optical technology (AAS-T) was introduced, and then approved by CRC committee (LWTech), and later by state of Washington in the first third of 2020. For more info, please review the program’s APR proposal. During this period, unfortunately, Covid-19 pandemic had to force us to suspend the entire program activities until further notice. To make the best use of the time; the lead faculty has started an initial “self-marketing” campaign for the program by:

- Working closely with the college marketing department for approving specific marketing materials, flyers, etc.
- Publishing a targeted article in the SPIE: Roufael, H. S; Richmond, M; Ames, S, 2020, New photonics education and training program to fulfill the industrial needs in the greater Seattle area | Proceedings Volume 11480, Optics Education and Outreach VI; 1148005 (2020) [https://doi.org/10.1117/12.2567314](https://doi.org/10.1117/12.2567314)
- Advertising in Photonics Spectra, one of the most important magazines in optics and lasers technologies.
- Outreaching to local industry partners, institutions, organization nationwide including (nLight, and many others).
- Searching for donation to support the program.
- Getting the lab more ready and organized.
- Creating a detailed curriculum course plan.
- Figuring out the required list of resources needed to be purchased.
- Searching for grants.
- Other…
2. Is the student to faculty ratio at or below 10:1? Or, is it below the ratio recommended for a program by the Dean or Vice President of Instruction, if one exists?

Yes, it below 10:1

3. Does the program meet industry standards? Are the industry-validated competencies being successfully met by program graduates? If industry certification/formal recognition exists, has the program achieved such?

Yes, it does. LWTech is now the first institute of technology in the northwest of the U.S. and in Washington that offer this technical education. By offering a:

1) Curriculum Quality: To ensure the quality of the teaching outcomes, the program’s technical course curricula are built upon the:

- National Center for Optics and Photonics (OP-TEC) skill standards,
- advanced manufacturing technical education (AMTEC), educational literature, e.g.,
- and of course, on other hands-on Problem Based Learning (PBL) approaches recommended by the industry.

2) No Electronics courses prerequisites that used to be a sort of stumbling block for new students interested in the Photonics program. Only, what is relevant of electronics courses are introduced.

3) Offering Diverse Advanced Photonics Certification Options: The program structure was carefully crafted to provide students with the most relevant theoretical and practical content. It is based on four-course categories: 1) Core Academics, 2) Core Electronics/Computer, 3) Core Photonics, and 4) Up-dated photonics-enabled-technology (PET). The PET includes advanced courses in telecommunication, optoelectronics, laser-manufacturing, imaging, and remote sensing, and lighting and illuminations. On top of that, the program provides a Laser system repair certification, that provides specific technical pieces of training on photonics system repair where graduates can maintain systems optical and electronics parts found in laser systems, biomedical device-laser based systems, and other similar types of equipment. More information on the program’s pathway can be found in the flowchart shown in figure.2 of the (SPIE paper).

The new (LOT) program will offer seven new certifications of completion:

- Photonics System Technician,
- Laser/Photonics System Repair Technician,
- Laser Manufacturing Technician,
- Optoelectronics Technician,
- Fiber-Optic Communications Technician,
- Imaging and Remote Sensing, and
- Lighting and Illumination.
4) Recognized Industry Standard Certification: On the other hand; another important milestone is that; the program offers completion and preparation for some of the industry-related certifications from well-recognized organizations such as:

- The Institute of Printed Circuit (IPC).
- Electronics Technician Association (ETA) which is accredited by the International Certification Association Council (ICAC).
- Not to mention that, the program provides student with several industry standard software programs including; SolidWorks, Optics-Studio (Zemax), LabVIEW, and other.

The certifications are embedded throughout the program, beginning with the first quarter. We believe this approach will open doors for many students and allow for career opportunities directly upon graduation. A brief description of each certification, training/industry of some certification(s) out of 7, and the possible entry-level job opportunities are introduced in Table 1.

Table 1, Examples of embedded industry certifications.

<table>
<thead>
<tr>
<th>Title</th>
<th>Certificate Description</th>
<th>Training / Industry-Recognized Cert(s)</th>
<th>Career Pathway (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photonics System Technician.</td>
<td>Students are prepared to apply basic engineering principles and technical skills in support of engineers and other technical professionals engaged in developing and using lasers and other optical devices and rays for commercial or research purposes.</td>
<td>Graduates will be qualified to pass the exam of the Electronics Technician Association (ETA) – “Photonics and Precision Optics”.</td>
<td>National Laboratories such as; Lawrence Livermore National Laboratory (LLNL), and JPL. Companies such as Lockheed Martin, and B.E. Meyers, or other similar in (Figure.3)</td>
</tr>
<tr>
<td>Laser/Photonics System Repair Technician.</td>
<td>Prepares students to apply knowledge of laser systems technologies and skills in maintaining optoelectronic</td>
<td>Graduates will earn IPC-Certifications include: - IPC-J-STD-001G,</td>
<td>Manufacturing industries, Business owners, Hospitals, etc., or other</td>
</tr>
</tbody>
</table>
4. Are there sufficient employment opportunities for program graduates, and are graduates obtaining employment in the field?

In short, YES indeed.

1) And, I would like first to start with this recent email message from Mike O’Brien. Mr. O’Brien is an active advisory committee member. “There is a huge shortage of Laser Technician country wide”. See email screenshot in figure.2

![Email screenshot from Mike O’Brien – An advisory committee member.](image)

Figure.2: Email screenshot from Mike O’Brien – An advisory committee member.

2) On the other hand; the program offers many pathway options as shown in figure.3.

![LWTech’s Lasers and Optical Technology Program’s Career pathway.](image)

Figure.3: LWTech’s Lasers and Optical Technology Program’s Career pathway.

3) Examples of “Practical” related Job Postings (Seattle greater area) that proves the importance of the Photonics program to the tech industry in the Greater Seattle’s area.

<table>
<thead>
<tr>
<th>Client: Meta (Facebook/Meta, Inc)</th>
<th>Job Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Title: Lab Technician III</td>
<td>Job Summary:</td>
</tr>
<tr>
<td>Job Location: Redmond, WA</td>
<td></td>
</tr>
<tr>
<td>Job Type: Contract Duration: 12 months</td>
<td>The main function of an optical lab technician is to perform characterizations in an R&amp;D optical lab environment. The optical lab technician will work closely with the Technical Leads, Optical and Display Engineers to carry out the measurement and characterization needs in a timely fashion.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| Job Responsibilities: | - Operate, maintain and troubleshoot off the shelf, custom and semi-custom tools / testers in optical labs.  
- Collect data from the testers and summarize them in an organized manner  
- Work with engineers and managers to plan the build of new and custom metrology tools and performance evaluation activities and align plan with the project schedules.  
- Defining scope with stakeholders.  
- Communicate plans and updates with stakeholders.  
- Work with stakeholders to develop test plan given expressed needs  
- Understand instrument limitations and tester alternatives  
- Create a plan for the testing of components and subsystems as the units become available and as metrology tools become available  
- Prioritize testing, ensure tester and sample readiness  
- Organize workflow of samples to testers  
- Plan and implement logistics of the study  
- Display effective organization skills and manage multiple and sometimes competing priorities  
- Demonstrate strong capabilities to engage directly with leadership on strategy and be able to pivot to granular detail within working cross-functional teams  
- Implement task intake and management system for requests to the team.  
- Drive standardization of delivery activities to increase efficacy of service including SOWs, qualification protocol, and documentation for metrology tools. |
| Required Qualifications: | - Associate's Bachelor's degree or higher in Optics, Physics, Engineering or other technical area.  
- 2+ years' experience in building fixtures and jigs under the direction of supervising engineers or lab manager |
- 2+ years hands-on Experience in running one or more optical metrology tools like: spectrometers, MTF stations, haze meters, BRDF measurements, transmission measurements, interferometers, surface profilers etc. metrology or equipment related fields.
- Able to organize tasks and work independently
- Able to do effective data analysis skills (excel, jmp, tableau)
- Able to do data effective data summary and presentations (power point)
- Able to write SOP documentation for tool use
- Clear communication (oral and written)

Preferred Qualifications:
- Bachelor's degree or higher in Optics, Physics, Engineering or other technical area.
- 3+ years of hands-on experience in optical labs
- Ability to work with minimal direction and managing a project independently from start to finish
- Working, communicating, and collaborating in a fast-moving, cross-functional team environment
- Programming experience in: LabView, Python 3.6, MATLAB,
- Experience in Solid works and ability to read technical drawings, 3D printing of parts
- Project management skills (Gantt charts)
- Experience working in cleanrooms

Based on Barry Silverstein (bsilverstein@fb.com) “No experience required” Meta is willing to offer our graduates an internship.

Example 2.

<table>
<thead>
<tr>
<th>Client: Agiliti</th>
<th>Job description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical Services Retention Laser Technician 7 - Seattle, WA Seattle, WA</td>
<td>Retention Laser Technicians maintain a professional relationship with all physicians, hospital staff, physicians’ office staff and other personnel both in appearance and behavior. A Retention Laser Technician’s role is to make sure they have a clear understanding of market physicians’ engagement with Agiliti services. The Retention Laser Technician role needs to make certain physician needs are met and communicated to the Operations team. The Retention</td>
</tr>
</tbody>
</table>
Laser Technician is also responsible for all duties of a Laser Technician while handling surgical case assignments, while helping Agiliti understand what is needed to maintain their business. Work with strategic surgeons and the ROM team to resolve service concerns that arise. Will spend up to 80% of your time supporting surgical cases in the assigned Division, and report all activity in Customer Relationship Management the remainder 20% of the week, which will be reserved as an office day. Assist sales in onboarding newly added surgeons. Maintain a relationship with key OEM partners who can help support our physicians. Explain and demonstrate clinical benefits of strategic Agiliti offerings.

Primary Objectives and Responsibilities

- Serves as the physician contact for strategic surgeons who need support in the Division they are assigned.
- The Retention Laser Technician will work with surgeons while performing surgical cases. These duties can be inservices, laser education, case support, surgeon problem resolution and CRM data entries.
- Works to become a subject matter expert with assigned lasers.
- Present in operating room during procedures; level of involvement in procedure is subject to physician demand.
- Removes, cleans, disinfects, and sterilizes all surgical equipment after procedures.
- Ensures operational excellence of all vehicles and equipment by communicating defects or necessary maintenance to key stakeholders in a timely manner.
- Transports equipment to ensure that it is in the right place at the right time for necessary procedures.
- Completes daily administrative tasks such as creating and closing work orders to obtain purchase orders, finalizing equipment logs, processing timecards, incident reporting, expense reporting, and any additional paperwork.
- Maintains a clean and safe work environment and complies with health and safety protocols.
- Obtains various certifications upon onboarding process and keeps current on certifications as needed. May be required to obtain additional certifications based on market demand.
- Maintains Department of Transportation and CPR certification.
- Willing to work flexible hours, including evenings, weekends and holidays, as well as emergency off-hours as required to support a 24/7 schedule.
- Ability to travel within the assigned Division.
- Complies with HIPAA regulations in all matters.

Appendix F: Program Viability Reports
| Qualifications | Prior medical, EMT, Surgical Technologist, or military experience preferred.  
|                | Must hold a current, valid, and unrestricted driver’s license. Must have a safe driving record based on Agiliti policies.  
|                | Must be able to lift up to eighty pounds and push or pull up to one hundred pounds.  
|                | Must be able to stand and/or sit for long periods of time as well as being able to bend and reach repeatedly.  
|                | Able to frequently bend, stoop, twist, climb, crouch/squat, kneel/crawl, sit, and stand for long periods of time. Prior experience with lasers or operating room Knowledge, Skills, and Abilities  
|                | Prioritizes customer service; willing to go above and beyond to ensure prompt and courteous service.  
|                | Demonstrates effective interpersonal communication skills with a variety of audiences and displays consistent conflict resolution skills.  
|                | Exhibits excellent organizational skills with a high attention to detail.  
|                | Displays the ability to work independently and reliably.  
|                | Exemplifies teamwork and shows respect for others.  
|                | Proves the ability to adapt to an everchanging work environment.  
|                | Operates with a proactive approach towards safety in compliance with all company policies and regulations.  
|                | Preserves a clean and safe work environment. |
5. *Is the supply and demand gap in industry and from regional colleges adequate to support the program's graduates obtaining employment in the field?*

Yes, and for more information, please see “LWTech’s Motivation” section, page 2 in the SPIE paper.

According to the SPIE’s global directory of programs in optics and photonics education; around eleven reported states and territories nationwide offer Associate degrees in Optics and Photonics education. This includes California, Florida, Idaho, Iowa, Massachusetts, Michigan, New Jersey, New York, North Carolina, Texas, and Puerto-Rico. There is not a single program in Washington State, therefore, to expand science, technology,
engineering, and mathematics (STEM) based technical education programs, and especially to serve many regional photonics partners; LWTech was the first public college that decided to take the initiative by introducing a brand new two-year associate degree (AAS) program in (Lasers and Optical Technology) in the Greater Puget Sound region.

6. Do entry level wages exceed 120% of minimum wage? Yes, it does. The average wage for a laser technician in Seattle is between $40,234 – $54,292 per year. 
   Source ZipRecruiter, and Salary.com

7. Are there career advancement opportunities available for those graduates who perform successfully on the job? Yes,

1) After completing the AAS-T degree, students are qualified to continue their higher education, earn internships in for example the University of Washington (UW), UW, Center of Renewable Energy, META etc.,

2) As mentioned earlier; in Q.4. The program offers many pathway options as shown in figure.4.

![Figure.4. LWTech’s Lasers and Optical Technology Program’s Career pathway.](image)

3) Plus; From (PBL) into regionally specific application-based scenarios. For the new (LOT), the lead faculty will continue engaging industry partners in developing lab experiments/projects that go beyond basic PBL to enhance it into regionally specific, application-based learning. This will be accomplished through outreach to local firms, understanding their issues and activities, and integrating those activities into the lab environment. This collaborative process will not only enhance the level of training of our students but will also encourage continued faculty collaboration with regional business partners, resulting in the development of long-term partnerships with
members of the community and local industry. While conversations are preliminary, faculty at the University of Washington (UW) have expressed interest in collaboration with facilities and course transferability. The college is hopeful LWTech students will have a strong bridge to UW in the future.

8. Is the program advisory committee positively affecting and supporting the program?

Yes: Indeed!

1) The college is privileged to have a diverse group of stakeholders including representatives of local manufacturing partners such as Lockheed Martin Corporation, Synrad (A Noventa company), Olympus, Stryker, Microsoft. And from national laboratories such as Lawrence Livermore National Laboratory (LLNL), Jet Propulsion Lab (JPL), and others.

This collaboration is indeed working to forge closer cooperation between industry and technical education. Thus, Upon the recommendations of several college/advisory meetings, the new (LOT) program is designed to support the three broad categories of photonics technicians that could be found in many firms in the greater Seattle area, abridged as the following:

a) Photonics specialists. These technicians work in research and development (R&D) laboratories as team members for original equipment manufacturers in lasers, optics, and photonics and as field service techs.

b) Photonics-Enabled-Technology technicians. These technicians typically work in industries in which photonics technology enables processes to be accomplished at higher efficiencies or with greater precision. The use of lasers in manufacturing for cutting, welding, measuring, and aligning is an example of this “enabling” principle.

c) And lastly, for serving Incumbent Workers who require continuing education. These technicians are already employed but require additional training to advance in their fields or to adapt to changes in the workplace.

2) On the other hand; working in partnership with business advisory committee members is one of the key duties that keep the college relevant to ensure the technical education is fulfilling employer’s needs. Hence, one of the initial phases of inaugurating the new (LOT) program was developing strong connections and communications with our partners to also include Photonics education advisors

- (e.g. the National Center for Optics and Photonics Education (OP-TEC), Waco, TX, and the
- International Society for Optics and Photonics (SPIE), Bellingham, WA), and
- academic organizations (e.g. the University of Washington (UW), Seattle, WA), and
• significantly industry advisors.

3) The program has received a generous donation from many companies/Industry Partners in the greater Seattle area to name a few, please see table.2.

Table.2: Brief summary of program donations

<table>
<thead>
<tr>
<th>Company</th>
<th>Donation Description</th>
<th>Advisory Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synrad:</td>
<td>A quantity of 5/250 Watts (CO-2) Lasers (Worth 50 – 70 $K).</td>
<td>Yes, Industry Partner</td>
</tr>
<tr>
<td>Facebook (Meta):</td>
<td>A generous ($25,000) donation.</td>
<td>Industry Partner</td>
</tr>
<tr>
<td>Boston Scientific:</td>
<td>Microscopes, and other lab supplies</td>
<td>Industry Partner</td>
</tr>
<tr>
<td>Stryker:</td>
<td>A donation of $10,000 of medical device equipment.</td>
<td>Yes, Industry Partner</td>
</tr>
<tr>
<td>Other.</td>
<td></td>
<td>Industry Partner(s)</td>
</tr>
</tbody>
</table>

9. *Is the program cost-effective/economically supportable?*

Keeping in mind that; the program is new for the college, and to the community. Being said, we don’t have enough data yet. It still under development and (already has/will need) expensive equipment and lab resources. Therefore, equipment will need future/annual maintenance (let’s say after 1-2 years of the purchase). The sustainability cost is still under investigation.

• An expected/estimated amount of ($1,000 - $3,000/year) should be reserved for sustainability, and maintenance, purposes etc. Again, this amount is preliminary and indeed subject to change.
• Plus, the lead faculty can participate in maintaining equipment’s if this fine to reduce the maintenance cost.
• He is also still working on getting donations from industry, government grants to full fill the program resources need.

10. *Other factors that may be determined during the process that may impact program viability.*

The Photonics program has struggled for many years. It obviously has enrollment issues and the lack of data is a large barrier. After running a brief root cause analysis to the situation, we found the following points summarized below.

**Recommendation**

List of Recommendations/changes
- Marketing
- More Classroom/Lab space for two-digit students’ number.
- Flexible Class Schedule
- Advanced Equipment/Tools/Software
- Accreditation
- Work balance for Faculty.

<table>
<thead>
<tr>
<th>#</th>
<th>Point</th>
<th>Recommendation</th>
<th>Comments/What has been done so far?</th>
</tr>
</thead>
</table>
| 1 | Marketing | After analyzing the trends over the last 4 years, for the photonics program, as well as briefly for the biomedical (BMDT); the area where considered to be the most important is the student low enrollment. This could be due to direct shortage in marketing for industry, High-School, and individuals. Thus, marketing is probably is the major point that needs to be focused on (now and then). The college has created wonderful programs that both the State of Washington, and industry recognizes. Thus, the right question that shall be asked is “how to better market our programs?”. Here are some points to consider: | From the lead faculty end.  
- Published a targeted paper for the scientific community.  
  Example SPIE, 2020  
- Advertising in elite Photonics magazines:  
- Posting on Professional Social Media such as “LinkedIn”, there are 15 “likes” of the program from experts in the field. |

1. Securing an annual budget for the marketing and recruiting purposes.  
2. Targeting the right audiences e.g.;  
   - “Women”.  
   - “Veterans”. Many veterans are interested in this program.  
   - “High School students”. We need to invite more students
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Class Space</td>
<td>The lab capacity is not big enough to host two-digit number of students e.g. (10-15 students). Therefore, if we are seriously wanting to give this program a chance; then let’s not to put strict conditions especially on enrollment (at least for now). I know its difficult decision to make, but “There is no victory without sacrifice”. However, if we must go for two-digit #, then we need to have:</td>
</tr>
<tr>
<td></td>
<td>Need more Space for students.</td>
<td>No action was taken yet, due to the uncertainty of running the program.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The current space in (W-116) can be good only for (5-7) students.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Class Schedule</td>
<td>We need to think of (if necessary):</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No action was taken yet, due to the uncertainty of running the</td>
</tr>
</tbody>
</table>

- “Students of color”. They need to be encouraged to participate.
- Social (Media / Networking).
- National Radio advertisements.
- Inviting protentional students to Open House. Heads up: Virtual Open Houses are sometimes effective.
- Inviting industry experts.
- Etc., There are many other innovative ideas.
- Participating in job fairs to encourage industry partners to support the program.
- Virtual Open-House However, this is not enough.
1. Running the program every single quarter not cohort.
2. Many students prefer (Saturdays), and/or Evening classes during business days.

**4 Advanced Equipment**
To match the industry standards; the program needs advanced and stat-of-the-art tools and equipment, such as optoelectronic e.g. (lasers, advanced metrology instrumentations), software licenses and computers.

Lead faculty is working toward getting funds/donations, and possible (NSF) grants.

**5 Accreditation**
ABET accreditation is strongly recommended.

No action was taken yet, due to the uncertainty of running the program.

**6 Work balance for Faculty**
The lead faculty is working “Solo”. He is taking care of two programs; without any extra support i.e., without an Instructional Teaching Technician (IST). Hence, the lead faculty is practically doing two jobs; one as faculty, and another “hidden” as an (IST). Thus, there is not enough time for him to take care of everything; includes;

- Developing course curriculum
- Creating lab (Hands-On) assignments
- Program marketing, recruiting, and outreaching.
- Outreaching to vendors
- Creating purchase requisites,
- Taking care of the two

Therefore, if we want to move forward; the lead faculty needs enough time to focus only on his duties. Some of them includes creating
- Weekly course curriculum.
- Theoretical Lessons/Lectures.
- Lecture Presentations,
- Hands-On Lab assignments.
- Testing the lab Assignments.
- Outreaching industry partners.
- Marketing.
- Other programs and college duties.

Etc.,

*One more thing*
Due to the uncertainty of whether running the program or not; many important
The labs only require especial care, and a lot of manpower / physical efforts, and time. The lead faculty had usually to lift heavy tools (more than 50 lbs.), equipment, moving big items, moving donations from companies into campus. Recently, he started to experience pain in his upper backbone. Anyway, this lab tasks consumes a huge chunk of his time, energy (approx. 45-55%) to focus on other duties.

Facilities support for help if the situation requires more than a one manpower, e.g. moving big metal cabinet, etc., milestones had to be paused or suspended. Thus, having good intel is so important for faculty to get ready and better plan for what matter to the program(s).

Thanks for your understanding.

One last word. “Optics and Photonics technology is essential for the nation”. Therefore, I am afraid that; shutting down the program; we will not only gets us to lose all the time, efforts, and money we have spent on currently available equipment, lasers, etc., but most importantly; the opportunity for many students to make good living and serving this country will no longer be exist.
Program Viability Report
Spring 2022

Program: Electronics Technology
Introduction

The Program Viability process for Electronics Technology was triggered in Winter quarter 2022 after enrollment was determined insufficient to start a new cohort. This was the second consecutive quarter enrollment was below a financially feasible level using a college formula to determine minimum enrollment levels for cohort-based programs. The Program Viability process is detailed in the faculty collective-bargained agreement (CBA) in Article 29 MOU K. As specified as task force was formed to produce this report.

Task Force Members

The Program Viability Taskforce conducting the viability analysis included the following members:
• Neha Kardam, Program Department Chair
• Dr. Priyamvada Singh, Program Faculty
• Dr. Mike Potter, Division Dean
• Vicki Chew, Dean of Instruction – Assessment and Curriculum Development
• Greg Bem, Interim President of the faculty union
• Dr. Hany Roufael, Faculty Peer from Division
• Craig Arno, Advisory Committee member

Meetings

The task force held 3 meetings as required in the faculty CBA. The meeting dates were
February 22, 2022
March 15, 2022
March 22, 2022
All meetings were held on Zoom.
The first taskforce meeting, convened by the Dean, was dedicated to describing the viability analysis procedure and primary reasons for beginning that process, as well as the roles and expectations for those involved in the analysis. The second convening of the taskforce included the presentation of the initial results of the viability analysis to the team. The team asked questions, clarification, etc. The team determined the need for additional information. The third convening of the taskforce focused on discussion of the results and formulation of a recommendation for program continuance with revisions.
This report is scheduled to be presented to the Vice President of Instruction April 29, 2022.

Program Viability Question Responses

Question 1. Is enrolment adequate? Is there a long-term trend of declining or persistently low enrollment? Each program has a designated annual FTE target that is determined by the college in collaboration with the faculty, program director, and advisory committee. Analysis of the program may include curriculum needs, facility and equipment availability, safety factors, and the optimal number of students that the instructors(s) can successfully manage at one time. Is this designed annual FTE target being met?
When we examine enrollment statistics from 2017 to 2019, we see that enrollment was consistent from 2017 to 2019, but it began to fall after 2019, when structural changes to the electronics program were made by offering cohort-based models. The curriculum was revised in 2020, several course labs in the electronics program have been rebuilt over the last three years, and equipment has been updated.

Currently, students are being enrolled in every Fall quarter only.

Question 2. Is the student to faculty ratio at or below 10:1? Or is it below the ratio recommended for a particular program by the Dean or Vice President of Instruction, if one exists?

Instructors have been successful at managing students (1 instructor per 12-14 students). However, this year we had a record low enrollment of six students in the Fall, one of whom was
placed at SpaceX and thus left the program, and another who had frequent financial assistance paperwork issues and thus decided to take a break for some winter quarter courses.

*Question 3. Does the program meet industry standards? Are the industry-validated competencies being successfully met by the program graduates? If the industry certification/formal recognition exists, has the program achieved such?*

With the support and invaluable guidance of the electronics advisory committee and industry partner Astronics Corporation, the electronics program structure began a revision in 2019. The final revised curriculum proposal was submitted in the fall of 2020, and the changes were approved in the spring of 2021.

In 2019, the faculty met with the Astronics Corporation to discuss possible changes to their curriculum that would align with industry standards; based on the feedback received, the new electronics program was re-designed. Along with industry inputs, we received feedback from the electronics advisory committee which assisted the faculty in developing the curriculum (attached the meeting minutes from December 11th, 2020).

Below is the brief outline of the new electronics program structure:

**Proposed new Program structure Certifications (95 credits)**

The new/modified Electronics Program offers an AAS degree (2 years) (95 Cr. Hr.).

1st quarter: Electronics Manufacturing Assembler (IPC JSTD 001, IPC 610, and IPC 620 New)

2nd quarter: Introduction to Printed Circuit Board (PCB) (IPC CID New)

3rd quarter: Electronics Systems Repair Technician

4th quarter: S.M.A.R.T Industrial Robotics

5th quarter: Digital Electronics

5th quarter (elective 1): Electronics Communication System Specialist New (FCC certification)

5th quarter (elective 2): Power Electronics Technician New

6th quarter: Electronic Technology AAS Degree Certificate

Electronics Program offers a variety industry-recognized certifications as mentioned below:

1. IPC A-610, Acceptability of Electronics Assemblies
2. IPC J-STS-001 Requirements for Soldered Electrical and Electronic Assemblies
3. FCC General Radiotelephone license exam preparation
4. CET “Associate” level exam certified by CET preparation

*Question 4. Are there sufficient employment opportunities for program graduates, and are graduates obtaining employment in the field?*
The EMSI Alumni Outcomes report detailed 76 alumni who graduated from LWTech in 1993 to 2021. 76% of alumni were working locally in a field related to their program of study. The top occupation codes were Electrical and Electronic Engineering Technologists and Technicians (17%), Unclassified Occupation (10.53%), and Calibration Technologist and Technicians and Engineering Technologists and Technicians, except Drafters (6.58%). The top job titles were Electrical and Electronic Engineering Technicians (14.47%) and printed Circuit Board Design Drafters (9.21%). The top three employers were Boeing (10.53%), Physio-Control, Inc. (9.21%), and Zetron, Inc. (6.58%). The top skills alumni included in alumni online profiles were troubleshooting, customer service, electronics, and communications.

Labor market data forecast for electrical and electronics engineering technicians (resource)
Question 5. Is the supply and demand gap in industry and from regional colleges adequate to support the program’s graduates obtaining employment in the field?
A list of colleges that offer a similar program is provided below. According to statistics, there is a demand for 301 electronics graduates with an AAS degree, but Washington state has produced only 52 graduates for 2020-2021. We clearly see a supply-demand gap of 249 graduates in Washington state.

![College Navigator](image)

Question 6. Do entry level wages exceed 120% of minimum wages?

The average wage for an electronics technician is $35.85 per hour, which is 248 percent of the minimum wage (14.49 per hour).

Question 7. Are there career advancement opportunities available for those graduates who perform successfully on the job?

There are many pathway options for Electronics students to complete an Applied Bachelor’s degree, both at LWTech, and at in-state universities and colleges. Below is the electronics pathway flowchart:
Question 8. Is there a program advisory committee positively affecting and supporting the program?

The electronics advisory committee is very active and meets twice a year for an hour. The following are some of the points that encompass the contributions of the electronics advisory committee:

a) **Devoted extra time to guide instructors:** Apart from the assigned advisory meeting, we've scheduled meetings with members of the advisory committee who've assisted us in revising the curriculum that adheres to industry standards.

- Craig Arno has given exceptional support in providing knowledge on different topics to the instructor related to PCB layout for example, Basic Electronics design layout, Component selection libraries, Schematic Sub-circuit Building Blocks, Modeling tools, ERC, DFM, PCB Layout and Mechanical Product Design. From his busy schedule, he...
took time to help us improve as an instructor and provide such valuable information on different topics is remarkable.

- Cherie is a PCB expert who has been guiding us in developing the PCB certification course outcomes. We are extremely appreciative of her assistance in validating and improving our electronics program in accordance with industry standards.

b) Guest Lectures: Some members of the advisory committee have generously donated their time to give guest lectures to our students.

c) Equipment donation: The advisory committee has donated electronics equipment to the program. For example, from Astronics Corporation, we received a large amount of electrical equipment that our students used for experiments and projects.

d) Partnering the electronics program with EPTAC: We have a partnership with the EPTAC, which provides free instructor certification training, thanks to the support of advisory committee members. Neha, Dr. Hany, and Shweta have previously obtained trainer certifications in IPC A-610, Acceptability of Electronic Assemblies, and IPC J-STD-001, Requirements for Soldered Electrical and Electronic Assemblies.

e) Assisted in the recruitment of new students: The advisory committee has constantly guided us in terms of new student recruitment strategies; a few examples are listed below:

- Recommended going out to job placement agencies to find new students, either by putting up LWTech electronics program advertising or by speaking with them about the program. Reaching out to government-supported retraining locations, such as the Washington State unemployment office, and reaching out to someone who was in the job but not in a technical sector are very important. He advised contacting the Commission Approved Training (CAT) and the Training Benefits (TB) agency.

- Advised that students join the IEEE organization. He said that students and faculty members should attend conferences to network with industry professionals and spread the news about the new electronics technology program. He also proposed contacting a private consultancy to find prospective students.

- Encouraged faculty to engage in a cool conversation with students in high school or junior high that piques their interest in enrolling. He mentioned that we should inform them about the new electric planes being developed by companies that need electronics technicians. For example, 200 companies developing Electric plan technology (center of excellence of clean energy) NOVA Electric airplane - [https://www.pbs.org/video/great-electric-airplane-race-yija0p/](https://www.pbs.org/video/great-electric-airplane-race-yija0p/)

- Recommended reaching out to firms in the Seattle region who want their staff to have basic electrical expertise. They can enroll in some of the fundamental electronics courses, and they can further advance their careers by taking higher-level classes. Cherie also stated that enrolling students in a short certification program of 40 hours might inspire individuals to apply and enter the industry quickly.

f) Proposing a microgrid project: Advisory committee members introduced the electronics program to the microgrid project where they suggested the concept to conduct an on-
site/campus project to provide students with more hands-on training exposure. With sponsored financing, the objective is to establish a microgrid on campus. This project will open new doors for our students from a variety of disciplines and would be advantageous in terms of raising funds and gaining sponsorships.

Some of the top benefits are:

- Ownership of campus asset with modernize grid control and automation.
- A working model for hands on training to students.
- Meet green energy credits with micro grid.
- Resiliency and sustainability of your power system.

**Question 9. Is the program cost-effective/economically supportable?**

The Electronics program is cost effective; in the last four years, we have never run out of equipment. Instructions have been carried out very smoothly with no technical challenges. Any purchases made for the laboratory have been made from the program budget, and we have never gone over the budget limit in past five years. We would like to express our gratitude to the generous donors such as Astronics Corporation, Boston Scientific, Maple Systems, and others who have contributed significantly to the program by providing equipment and thus making the program very sustainable.

**Question 10. Other factors that may be determined during the process may impact program viability.**

1. **Enrollment trends after the cohort model was implemented**

   The comments below from the previous Dean, Michael Richmond's, 2020-2021 program review confirm the change in enrollment trends following the implementation of the cohort model.

   - The last area I ask the faculty to consider pertaining to enrollment is the structural changes that are affecting the program enrollment by moving to a cohort format from a stacked. The drop in enrollment is due in some part to my asking faculty to move to this model of delivery so that faculty are available to students at a higher level and to employ a model (cohort) that has been proven to increase student completion and success. As the data shows that for most cohorts during this time period analysis, the dropout rate was between 44-60% between quarter 1 and quarter 2. This pertains to the heavy load that the current faculty referenced where it was standard practice by the previous faculty to advise students to take between 21-26 credits per quarter, while also requiring 120 credits to obtain a degree.

   - The program also used to run in a stacked format of curriculum delivery that contributed negatively to student success, especially students of color. In the last year, the faculty ranks have turned over 100% and the new faculty practice the four connections while also reducing student credit load requirements quarterly and the overall degree requirements were reduced to 100 credits. The new model is designed around a cohort with students having a 12-15
technical credit load per quarter, while the faculty deliver classes in a sequenced model during the quarter. All of these changes have re-centered the program to be student focused, instead of it being a massive FTE driving machine. I look forward to seeing how this will improve student success.

2. **Marketing Strategies (Focus on Messaging is missing)**
   In Fall 2021, Shweta worked full-time to recruit new students with the assistance of the college's marketing team, which contributed significantly to our enrollment growth, as we began the Fall quarter with only two students and ended the quarter with nine prospective students. This demonstrates that an effective recruitment strategy worked; however, 9 students is still a small number, and we require more students to begin the new cohort.

   We believe that there is a communication gap between the program's marketing team and the target audience. There is a need to aggressively retool go-to-market efforts by promoting online learning and emphasizing the enrolment process and benefits provided by the college to students. While LWTECH offers many **financial assistance** programs to students, many high school students are unaware of their benefits, how they work, and who pays. Marketing teams should pay special attention to emphasizing the benefits, such as safety and earning college credit while still living at home. Also, if the college covers the cost, emphasize this information as well.

3. **NSF grant**
   Neha is also working on an NSF grant to create open educational resources (OER) material that instructors, administrators, and students can access and utilize for teaching and learning purposes. Electronics will develop two open educational resources (OER) courses: Introduction to Microprocessors and Microcontrollers and Introduction to Printed Circuit Board Layout and Design. Along with providing free education to students, this NSF grant will fund $2000 per year for three years on the marketing team's efforts to promote the electronics program. We actively work on strategies such as reaching out to companies where people working as assemblers would like to get an AAS degree in Electronics to advance their careers. Additionally, reaching out to the high school students, veterans, and workforce development.

4. **Student placement in Industry**
   The electronics program has also been extremely successful in terms of job opportunities for our students in the industry. Students in the program are hired during their final quarter or immediately upon graduation. Students from our program have been hired by the following employers over the last three years: SpaceX, Cisco system, Nintendo, Kory Electronics, Fuji films, Astronics Corporation, D.E. Hakanson, Inc, and Synapse Product Development. Some students excelled in the electronics program and were hired for positions above the technician level. For example, one student was hired as a Hardware Support Engineer at Cisco Systems, while another was hired as a Printed Circuit Board Designer at Monsoon Solutions and recently one of the students was hired as an Electronics Technician at SpaceX in Winter 2022.
Another testament to the electronics program's instruction is the recent emails Neha receive from recruiters expressing gratitude for hiring our students at the company. The following is an email snippet from a response from SpaceX and Monsoon Solution.

“One of your students reached out to me and informed me that he applied for the role. We invited him for an on-site interview and the team is excited to move forward with an offer! We haven’t officially extended his offer yet but I did want to follow up and share the good news. Thanks again for your help. “

-Nancy Liang, Recruiting Coordinator- SpaceX (Jan 31st, 2022)

“We actually hired a student a couple of years ago (2019) who graduated from your program, Paul Reed. He’s been doing well.”

-Jenifer Kolar, Vice President of Engineering, Monsoon Solutions, Inc. (Feb 25th, 2022)

5. Demand supply gap
Due to the rapid advancement of technology, the electronics industry has a high demand for electronics technicians, assemblers, and manufacturers. Instructors receive a high volume of emails from recruiters at companies such as Blue Origin, SpaceX, Amazon, and Helion energy seeking electronics technicians trained in our program, but we are unable to meet that demand due to low enrollment.

6. Reduced equity gap
During the 2016-17 academic year, the program had six students (all demographics) withdraw from classes. While by the 2018-2019 academic year, that number dropped by 50% to three students withdrawing. When breaking down the student demographics further, the data shows that students of color withdraw rates went to zero during the 2018-19 academic year. This achievement of reducing equity gaps should be celebrated by the faculty and is a testament to the hard work they are putting into this area of improving students of color equity gap program outcomes.

7. Pandemic (Covid-19) (online learning for Electronics technology which is comprised of laboratory has been challenging)
It has been observed that the public health crisis and economic and social upheaval of the past two years have led to significant enrolment declines at community colleges around the country. The recent emergence of the highly contagious omicron variant of the virus poses even more volatility everywhere. This year’s economic rebound, with wages rising and unemployment falling, could be influencing many to stay away from college. But continuing public health troubles and other factors — including disparities in Internet access and unexpected family caregiving obligations — may also be in play.
Walter G. Bumphus, president and chief executive of the American Association of Community Colleges, said the situation is perplexing. “I’ve never seen anything quite like the last few years in community colleges,” he said. “The pandemic raised its ugly head in a number of ways for our colleges.”

“ Everybody’s concerned about enrolment,” he said. “No doubt about it.” But he said educators are hoping the numbers will pick up in coming months as students seek short-term career training or courses that could help them transfer to universities.

8. Other concerns mentioned by the advisory committee

➢ Are there any other "electronics" programs producing technician-level skilled labor? If not, then this decision is threatening to kill the only existing program producing this type of skilled labor. If this is true, the program must be protected if Washington State values this skill set.

The six colleges in Washington that offer electronics engineering technology programs are profiled below.

<table>
<thead>
<tr>
<th>School Name</th>
<th>School Type &amp; Setting</th>
<th>Electronics Engineering Technology Programs Offered</th>
<th>Undergraduate Tuition &amp; Fees (2018-2019) *</th>
<th>Credit Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bates Technical College</td>
<td>2-year, public; midsize city</td>
<td>Associate in Applied Science in Electrical Engineering Technician</td>
<td>$5,391 in-state; $10,889 out-of-state</td>
<td>90 Credits (AAS), and 106 Credits (AAS-T)</td>
</tr>
<tr>
<td>Bellingham Technical College</td>
<td>2-year, public; small city</td>
<td>Associate of Applied Science in Electronics Engineering Technology</td>
<td>$3,600 in-state; $4,547 out-of-state</td>
<td>93 credits (AAS)</td>
</tr>
<tr>
<td>Lake Washington Institute of Technology</td>
<td>4-year, public; large suburb</td>
<td>Associate of Applied Science in Electronics Technology</td>
<td>$4,251 in-state; $9,618 out-of-state</td>
<td>95 Credits</td>
</tr>
<tr>
<td>North Seattle College</td>
<td>4-year, public; large city</td>
<td>Associate of Applied Science in Electronics Technology</td>
<td>$4,461</td>
<td>111 Credits (AAS), and 112 Credits (AAS-T)</td>
</tr>
<tr>
<td>Spokane Community College</td>
<td>2-year, public; midsize city</td>
<td>Electronics Engineering Technician Certificate; Associate of Applied Science in Electronics</td>
<td>$3,547 in-state; $8,914 out-of-state</td>
<td>134 Credits</td>
</tr>
</tbody>
</table>
According to the above results, LWtech's Electronics program is the only one in the Kirkland area that offers an AAS degree in electronics.

When compared to other colleges in the greater Seattle area, the tuition cost for LWtech's Electronics program is reasonable.

According to a credit comparison, LWtech's Electronics program offers 95 credits AAS in total, including general education courses. This is a revised curriculum that is based on industry standards and places a strong emphasis on hands-on laboratory experience.

Washington State Work Source center shows a shortage of blue-collar workers representing "the trade" in Washington. Work Source website features 40 pages of more than 2000 jobs in Washington State that include the title "Electronics Technician." On the first page, we see the openings in the nearby areas of Redmond, Lynnwood, Seattle, and Bellevue. We believe it is worth noting that program graduates are in high demand.

Looking at the Washington State Workforce data, it appears that LWIT has failed in some combination of attracting interested students (partially due to Covid) and assisting them in locating funding resources for their educational endeavors.
According to the source, the Pandemic has resulted in a job crisis, which has had a significant impact on the US economy, which is heavily reliant on manufacturing jobs (which require expertise in industrial automation/ electro-mechanical automation/ communication/ electrician/ soldering/ assembly, and so on). Additionally, the current administration has recently proposed significant investments in infrastructure, climate change, and manufacturing reconstruction, all of which will create new blue-collar jobs in addition to existing ones.
Recommendation

We strongly recommend not to close the program. We believe that if the following changes are made, the target enrollment for the program can be met:

1. **Return to modified block format:** Enrollment trends indicate that enrollment peaked when students enrolled each quarter and did not fall until cohort (only begins in the Fall) was implemented in 2019; thus, we strongly urge reverting to the modified block format model. The modified block format entails opening all courses to enrollment and establishing a threshold based on the number of students enrolled; if the number of students enrolled exceeds the threshold, the course is offered. The modified block format will prioritize courses that lead to the completion of the AAS degree. This model may result in an increase in instructor credit hours, which can be offset by hiring an adjunct to teach courses that exceed the instructor's capacity.

2. **Long term plan suggestion:** The updated block format may take some time to become successful, so we recommend giving the program more time to see the change in enrollment trend. We do not believe that expecting the electronics program to recruit a viable class in the fall, as has been suggested for other programs, is a reasonable approach.

3. **Marketing sponsorship:** We believe that college should prioritize actively marketing electronics programs, not just through social media, but also by reaching out to prospective students in person. For instance, outreach to veterans and high school students, as well as visits to electronics companies that employ individuals with only a high school diploma as assemblers, are all ways to promote the electronics program. We should emphasize on the financial assistance provided by the college to students when marketing the program, as this information is not clearly featured on the program’s website, and if this information is not prominently featured, many people assume that pursuing an education is incredibly expensive. Additionally, we should highlight the program's employment opportunities, the companies with which students are placed (such as SpaceX, Cisco Systems, and others), and the program's guarantee of 100% placement upon completion.

4. **Offering afternoon and evening start with hybrid model:** Along with the afternoon schedule, we would like to offer evening classes to accommodate working professionals. Additionally, most electronics classes have been made asynchronous/synchronous so that students can attend lectures online and labs on campus, providing students with greater scheduling flexibility.

5. **Offering Math pre-requisite flexibility:** Offering Math pre-requisite flexibility to students who require a quick start and have prior experience in the electronics industry by organizing knowledge base exam.
LAKE WASHINGTON INSTITUTE OF TECHNOLOGY

Program Viability Report
Spring 2022

Program: Mechanical Design Technology
Introduction

The Program Viability process for Mechanical Design Technology was triggered in Winter quarter 2022 after enrollment was determined insufficient to start a new cohort. This was the second consecutive quarter enrollment was below a financially feasible level using a college formula to determine minimum enrollment levels for cohort-based programs. The Program Viability process is detailed in the faculty collective-bargained agreement (CBA) in Article 29 MOU K. As specified as task force was formed to produce this report.

Task Force Members

The Program Viability Taskforce conducting the viability analysis included the following members:
• Andrew Short, Program Department Chair
• Usama Al-Mandawali, Program Faculty
• Casey Melnrick, Asst. Director Recruiting & Outreach
• Dr. Mike Potter, Division Dean
• Vicki Chew, Dean of Instruction – Assessment and Curriculum Development
• Greg Bem, Interim President of the faculty union
• Mike Clifton, Faculty Peer from Division
• Jason Crutcher, Advisory Committee member
• Isseyas Mengitsu, Advisory Committee member

Meetings

The task force held 3 meetings as required in the faculty CBA. The meeting dates were
February 23, 2022
March 16, 2022
March 23, 2022
All meetings were held on Zoom.
The first taskforce meeting, convened by the Dean, was dedicated to describing the viability analysis procedure and primary reasons for beginning that process, as well as the roles and expectations for those involved in the analysis. The second convening of the taskforce included the presentation of the initial results of the viability analysis to the team. The team asked questions, clarification, etc. The team determined the need for additional information. The third convening of the taskforce focused on discussion of the results and formulation of a recommendation for program continuance with revisions.
This report is scheduled to be presented to the Vice President of Instruction April 29, 2022.

Program Viability Question Responses

1. Is enrollment adequate? No. We have been under enrolled.

   Is there a long-term trend of declining or persistently low enrollment? We looked at the Program Review for Mechanical Design Technology in Tableau. Enrollment trends (year total unduplicated headcount) are as follows:
2017-18 – 80
2018-19 – 50
2019-20 – 42
2020-21 – 48
2021-22 – 27

Is the designated annual FTE target being met? No, it is not. The following is the Summary for Annual FTEs for the Mechanical Technology (currently)
2014-15 – 46.43
2015-16 – 43.96
2016-17 – 27.11
2017-18 – 14.80
2018-19 – 20.73
2019-20 – 14.09
2020-21 – 28.84
2021-22 – 6.49 (not complete data)

2. Is the student to faculty ratio at or below 10:1?
   • No. There are currently 27 students who are designated as being in the Mechanical Design Technology degree and still enrolled at LWTech.
   • Yes. There are currently 9 students in the cohort.

3. Does the program meet industry standards?
   • Yes. The MDT program has the support of a dedicated and involved Advisory Committee.
   • Members have contributed to course content and the direct education of the students and faculty by providing support such as the following: employment; providing engineering documents, to current industry standards (NDA); joining class as guest speakers in person or via Zoom; providing company tours showing examples of the latest in manufacturing and engineering design; providing capstone projects, where students have worked on real company projects, with aerospace engineering staff, providing solutions to tooling and manufacturing aids.
   • Students are meeting industry standards for mechanical design and engineering documents, up to and including, ASME Y14.5-2018.
   • Testimonies have been provided attesting to the high quality and strong capabilities of the MDT students they have employed and the program in general.

Are the industry-validated competencies being successfully met by program graduates?
   • Yes, with help of our industry partners.
   • Students sit for and pass certification exams related to AutoCAD and SolidWorks.
   • These certifications are often required by companies for their employees.
   • After MDT students are hired, they require very minimal technical training on company time, compared to other programs. They are ready to work faster.
   • This is a strong indicator of their level of technical training.
If industry certification/formal recognition exists, has the program achieved such?

- All students do obtain, or are prepared to obtain, certifications in AutoCAD and SolidWorks
- Students provide employers with high quality portfolios illustrating that they are strong candidates for employment.
- Students do graduate with an AAS-T degree which, in many job postings, is a requirement.

4. Are there sufficient employment opportunities for program graduates, and are the graduates obtaining employment in the field?

- Yes. Students have been able to find ample employment locally.
- They are currently employed by engineering related companies such as Boeing, Microsoft, Crane Aerospace and Electronics, Sea-Bird Scientific, AeroGo, Seattle Safety, Astronics Aerospace and Electronics, Systima Space and Defense, Panasonic Avionics, Glosten Marine Engineering, and Blue Origin.
- The program also partners with the staffing agencies Actalent and Aerotek for employment research and employment opportunities.
- Students are earning internships. A student received a summer internship with Crane Aerospace and was hired afterwards. A student received a summer internship with Glosten Marine Engineering and then was hired.
- A student was chosen (hired), before she is graduating, for this summer’s internship and will be starting this summer.
- Students are being hired even before they have graduated. For example, one student was hired by Seattle Safety before he graduated. They worked around his class schedule so he could graduate.

5. Is the supply and demand gap in industry and from regional colleges adequate to support the program’s graduates obtaining employment in the field?

- Yes. Local employers are struggling to hire more drafters and designs as business recovers.
- Industry demand far exceeds the supply of students graduating from colleges. (NCES)
- Average annual total openings (2018-2028) is 60 for Snohomish County and 184 for King County. (BLS)
- Spokane College, and other colleges, are seeing this in their regions also.
- Mechanical Drafters are not in demand in King County, but just barely. (BLS)
- Mechanical Drafters are in demand in Snohomish County. (BLS)
- MDT program provides the level of education that most workers need to enter this occupation, which is associate degree. (BLS) Some other colleges do not provide this level of education.
- The MDT program is well thought of by industry. Hiring managers, at local employers, were surveyed using Zoom or email.
- The MDT program is well thought of by faculty of other colleges. According to instructors at other colleges with similar programs, the MDT program is more robust and focused than others.
- MDT students are out competing students from other colleges.
6. Do entry level wages exceed 120% of minimum wage?
   • Yes. Current minimum wage is $14.49 per hour.
   • Several students currently employed by local engineering companies have received consistently high wages.
   • Recent students have reported recent starting wages of $22 hour (152% of minimum wage), to $36.50 an hour (252% of minimum wage).

7. Are there career advancement opportunities available for those graduates who perform successfully on the job?
   • Yes. Students have reported significant promotion, increased wages, full benefits, and opportunities for continuing employer paid education.
   • According to the BLS, in King County, the average annual salary is $81,648 with an hourly wage of $39.25.
   • According to the BLS, in Snohomish County, the average annual salary is $77,504 with an hourly wage of $37.26.
   • The MDT program has also led to employer paid continuing education.
     o For example, one student was in a dead-end job. He graduated from the MDT program and was hired by Crane Aerospace and Electronics. 7 years later he is now a Senior Design Engineer. He is currently taking advantage of employer paid tuition of $5,250. He is pursuing a bachelor’s degree in Business on-line, at Central Washington University.
     o The MDT program opens the gate to lifelong learning.
   • Here are a few examples of promotions:
     o A student started at $26.50 an hour. He now earns $46.48 an hour as a Senior Designer Engineer. He could move up to Engineering Supervisor where he could lead a team of designers or any other group in Engineering/Manufacturing.
     o A student started at $27 an hour as an intern. She now makes over $62.50 an hour as a Senior Technical Designer.
     o A student started at $25 an hour. He now makes $58 an hour as an Engineering Operations Manager. He has also continued his education, earning a master’s degree.
     o A student, started at $28 an hour, after one year of employment now earns $30.90 an hour.
     o A student started at $20.19 an hour as a Drafter. He now makes $36.54 an hour after being promoted to Design Engineer.
     o A student started at $17.31 an hour. He now makes $43.27 an hour after being promoted to Program Manager.
   • Students from the MDT program have also gone on to complete the Bachelor of Applied Science in Design degree program. Student have been hired at a higher starting wage.

8. Is the program advisory committee positively affecting and supporting the program?
   • Yes. The Advisory Committee is instrumental in making sure the MDT program is up to date and teaching students what they need to compete for jobs in the industry.
   • The Advisory Committee consistently meets three times a year and regularly has a quorum of voting members.
Members have been guest speakers, have provided company tours, have provided industry documents and drawings, and have contributed to course content in other ways.

Last year for our Capstone projects, several engineering related staff from Crane Aerospace and Electronics, including three members of the Advisory Committee, provided real problems to solve and worked with students. This effort contributed to one student starting an internship and later getting hired by Crane.

Members provide information related to current projects, current employment needs, and predictions on future trends and employment.

9. **Is the program cost-effective/economically supportable?**
   - Yes. The program budget has been meeting current needs, including software and hardware purchases.
   - This program does not rely on other funding sources.
   - Students have the technology they need to learn and be successful.
   - The MDT program is also the creator and a major financial contributor to the Innovation Lab, which is used by Engineering, Architecture, Gaming, and other programs.

10. **Other factors that may be determined during the process that may impact program viability.**
   1. MDT is Adaptive, Meeting Challenges:
      - Mechanical Design Technology faculty have taken advantage of new technology and new ways of running classes to adapt to the challenges of COVID and the changing requirements.
      - With the current COVID protocols, all MDT classes are in-person and on campus, but now with added flexibility.
      - Because we are using Zoom and an OWL camera in the classroom, students can join the lectures remotely.
      - All lectures are also recorded so students may watch lecture content they missed.
      - Students joining the lecture remotely are counted as being “present” for attendance.
      - MDT was an early adopter of this technology.
      - We are also adapting to students who would benefit from being flexible on due dates for assignments and attendance.
      - Classes have run consistently with perfect attendance.
      - This has resulted in students not falling behind and being able to pass their classes and graduate on time.

   2. Loss of Students Due to COVID:
      A. MDT Students are Hands-on Learners:
         - MDT was hit hard due to the COVID related mandates, and we lost several students. It is unknown how many new students did not sign-up because of the mandates.
         - A significant reason our students join this program is because there is a substantial amount of hands-on content, and they are hands-on learners. Content includes activities related to the machine shop and welding lab, physical parts in
the classroom used to illustrate complex engineering concepts, and parts students design and build in the Innovation Lab maker’s space.

- In the past, employers have said that they hired our students because of their hands-on skills they gained in the program.
- Company field trips are a part of this program, and these did not happen with the restrictions.
- A few students were very clear that this is why they enrolled in the program and left because they were not going to be getting that content.

B. Student Make-up and Mandates:
- For some students, adjusting to the mandates was a big culture shock.
- In this program, students have many opportunities to be very flexible in creatively completing assignments and projects.
- One student felt they were “…being required to show my papers…” to continue his education.
- Mike Clifton, former Department Chair of the Machining program, and current adjunct professor teaching in the MDT program, said he felt this affected the Mechanical Design students more than the Machining students.

C. Challenging Program:
- Casey Melnrick suggested that with the complications of COVID, students may not have been willing to take on a degree program perceived as being as engaged, as challenging, as technical, as rigorous, and as lengthy as MDT.
- As we return to more normal conditions as we are doing now, this is expected to improve.

3. Impact of COVID on the Innovation Lab:
- The MDT program uses the Innovation Lab for several classes. One class is all about how to safely and effectively use the tools and equipment. 3D printers, routers, laser cutters, and other tools are used to complete industry related Cap Stone projects and design projects for other classes.
- The shared IST position was cut due to COVID related reduced funding.
- The IST position manages work study students.
- Reduced student support.
- Reduced maintenance of machines and equipment.
- Reduced replenishment of supplies and tools.

4. Impact of COVID on the Cohort Model:
- MDT was hit hard by COVID because it runs on a cohort model.
- New students can only join once a year.
- If enrollment is too low, a new cohort cannot start.
- Students experiencing complications with day care or employment were hard hit.
Recommendation

The Program Viability Committee recommends the MDT be continued with the following interventions.

Action Items to Increase Enrollment:
1. Increase Outreach to CTE staff and faculty
2. Attend and Present at Advising Quarterly Meetings
3. Change Time of Classes from Morning to Afternoon
4. Increase Marketing Outreach
5. Restore Shared IST Position for the Innovation Lab
6. We talked with/emailed the lead program faculty at Technical and Community Colleges who have similar programs to MDT, to gather data. This included Bellingham Technical College, Bates Technical College, Renton Technical College, Green River Technical College, and Spokane Community College. (See attachment)

Phase 1:
1. Email CTE staff and faculty at area schools to inform, build interest, and increase enrollment from local high schools.
2. Attend and present at Advising quarterly meetings to inform Advising about the MDT program so they will recommend the MDT program to new students.

Phase 2:
3. Change Time of Classes from morning to afternoon.
   a. More likely to attract industry people looking to add/improve skills and education.
   b. More likely to attract working students to take classes.
   c. More likely to attract students who are not “morning people.”
   d. More likely to attract LWTech students from other programs to take MDT classes.
4. Increase Marketing Outreach.
   a. Create promotional videos about MDT to share with CTE faculty and staff at area schools and social media.
   b. Target companies to provide training to industry.
   c. Reach out students who were rejected from attending university.

Phase 3:
5. Restore Shared IST Position for the Innovation Lab.
   • Manages work study staff.
   • Supports students using facility.
   • Supports faculty.
   • Maintains machines, equipment, tools, and supplies.
Attachment

Regarding Colleges with Similar Programs:
We talked with/emailed the lead program faculty at Technical and Community Colleges who have similar programs to MDT, to gather data. This included Bellingham Technical College, Bates Technical College, Renton Technical College, Green River Technical College, and Spokane Community College.

Some of the questions we asked were the following:
1. How is enrollment?
2. How are your programs structured? (one time a year start, cohort model, frequent new starts, etc.)
3. What challenges are you experiencing?
4. What is going well?
5. What demand are you seeing in the industry?

Bates Technical College
Emailed with Curt Meyer, Instructor, Mechanical Engineering Technology
Our AAS-T, currently has no enrolled students. Our difficulty with this degree is the heavy load of Gen Ed math and physics courses. These courses are only taught in this degree, therefore there is not enough students to feasibly run these courses.

Demand is reasonable for the students we are graduating from the AAS degree. The students that put in the effort are landing well paying jobs but my phone is not ringing as often as it did pre-pandemic.

Challenges are getting students to enroll. Marketing the program and getting out to the community has been challenging.

The AAS-T and the AAS allows for entry every quarter. Since the AAS-T really is not functioning, the following is the AAS Structure

The AAS is six quarters long.

Quarter 1:
The students are allowed to enter any quarter. They will take, what we call core classes. These courses provide the prerequisites for the next level. The core classes are taught each quarter.

Quarters 2-5
From quarter 1, the students move into a rotation of course that are only taught once per year. This rotation lasts four quarters. The courses are designed to only have the core classes as prerequisites so the students will be taking these courses with students from different entry times.

Quarter 6
This quarter is focusing on a capstone project or work-based learning.

The core classes enrollment ranges from 10-20. The enrollment is typically peaking in the fall, mid range in the spring and low end in Winter and Summer. These core classes feed three programs. These classes have students who are enrolled in our Civil and Environmental Engineering Technology, Electrical Engineering Technology, and our Mechanical Engineering
Technology programs. After the core classes, then the students are separated to focus on their respective programs.

We have only one FT instructor in the mechanical program. The struggle that we have had with single instructor programs is trying to keep the credit load manageable to teach and keep the programs full.

**Bellingham Technical College**

Interview with Scott Reiss, tenured faculty, Bellingham Technical College.

Engineering Technology – Mechanical Design – AAS-T

Interview notes. We talked for almost an hour.

This program is similar the MDT, but heavier in math.
They have an academic core, an engineering core, a mechanical core.
They have new starts every quarter.
They are structured in a “university model”.
Core classes run frequently. Students from Machining, Composites, and Mechanical take them so they tend to fill. (ex. SolidWorks)
You could have a common “safety class”

Fill classes by finding overlaps with other programs to combine students and fill classes. Specialty classes run once a year.
“Got to break out of silos and involve multiple programs to find common overlaps.”

They used to have a cohort model.

Entire population of BTC is down. “Everything is low”.
“My program has seen a hit”. ET-M is very low enrolled and just above critical numbers.

“You got to ride it out.” (referring to the LWTech MDT program)
We talked about how hard and expensive it would be to attempt to bring MDT back.

(email)
Their classes run “Mornings through early afternoon for face to face. I also have one online or hybrid course per quarter right now. Those are asynchronous, so I don’t have scheduled class times. I created Panopto videos and various exercises for all the lectures. I provide Zoom help whenever they request it.”

(email)
“It took years to completely switch over. Lots of moving parts when you start partnering with other programs. No idea if more students would enroll, but it would give them more opportunity to enroll if you allow open enrollment every quarter. We have little marketing for my program, and outreach is currently pretty limited due to COVID. In normal time we have various public events to attract high school students and others. Hope that helps.
Scott”

**Pros of Cohort model**

Easy advising for students and faculty
A higher quality education that is more focused (Scott said)
You know your students and how they are doing (easier to find jobs)
Students work together and know each other
“Maybe you’re doing more of what we should be doing.”
Cons of Cohort model
Students who fail a class cannot continue and drop out (never return)
Fall only starts result in some students going to another program
We talked about how students cannot be at their own pace (can only take classes when they are offered once a year)

Pros of University Model
Scott thinks their model is working well
“Might not be as good of an education but at least it’s open.”
Attrition is probably lower
Students who are ready to start can

Cons of University model
“Maybe you’re doing more of what we should be doing.”
Advising is a huge challenge.
Do not know when “your students” are graduating.
Spent a huge amount of time to switch (still not done)
“You lose control (of students).”
“Might not be as good of an education (as cohort model) but at least it’s open.”

Renton Technical College
Zoom with Mike Biell (ARCH and Structural) and Melvin Hortman (MET) Mechanical Engineering Technology
Interview notes. We talked for about an hour.

Melvin- “LWTech’s program is the program to aspire to.”
“LWTech leads the field”. (in education)
They teach at a shallower depth, so they are not as strong getting employed.

“A student with a Mechanical AAS will be hired over a student with a more general degree or a certificate.”

They have more of a “general drafting” program.
They have had very few MET students employed. Supply but not much demand.

Melvin commented on how large our maker’s space is to Mike.

Ex. An Architecture student will start with an ARCH cert. then typically go on to complete the AAS (which includes Mech. and Civil content)

They don’t want to step on other school’s toes by having a focused MET program.

In general, their students earn $24-28

Melvin doesn’t think they will separate the programs. He doesn’t think it would survive, but they explored it. They want to.
No plans to expand their MET program
If a student wants one or the other, they just take the 3 quarter cert.

Bad idea for them to have a stand alone MET AAS

They used to have a cohort with fall/spring starts. Little variation in classes. That went away.
Pros
More part-time students
have more diversity
90% can be done on-line.
They kept the programs connected to allow students to go either way for employment.
Their Advisory Committee thinks they are deep enough

Cons
A lot of work for staff to track students
Not very deep in any one subject

Green River College
Mechanical Computer-Aided Design, AAS
Emailed with Terry Waggan, CAD-Design and Engineering Faculty

How is your program structured? I am looking for if it is a cohort model, has one a start a year or multiple starts.
I try to start 2 101 classes per year, an opening in the Fall, then again in the Spring. They run as a cohort through the first 2 quarters, then all join in with the other, more advanced students in the program.

When during the day do your classes run?
First year classes are running mostly in the morning. Second year classes are afternoon for the Mech.

Do students from other programs take classes in your program?
There is always a little interest from engineering dept to learn AutoCAD or some extra SolidWorks

What is enrollment like?
Since restarting our program retention is one of the big issues. Fall 2020 I started 16, 4 are left. Spring 2021 I started 20, 11 are left, and Fall 2021 I started 16 and 12 are left. Right now the interest in Arch and Civil is so low that we are considering focusing more on Mechanical and letting the other 2 try to grow more later.

How has employment been?
I have not had any graduates yet (spring 2022). We have interest from some local companies. We have former students working for Blue Origin, and there are rumors they are spooling up.

What challenges has COVID created for your program?
Teaching online blows. We have been getting by, but our school went online to start the winter after starting fall normally. I am still behind.
Spokane Community College
Interview (Zoom) Jerry Murray – CAD Design & Drafting: Mechanical Engineering Technology. Instructor, Department Chair, Architecture and Engineering.
Interview notes. We talked for 1.5 hr.
- CAD Design & Drafting AAS
- Mechanical Engineering Technology AAS
- CAD Cert.
- I described the MDT program and he thought his was just like it.
- They used to be called MDT a while back.

Enrollment:
- Down a significant amount. 15 students first year, 15 students second year.
- SCC is down 25% overall
- CAD D&D used to be waitlisted and full.
- Only program students take the classes. Occasionally they one or two students a year taking a class here and there.
- Not great numbers now but not catastrophic.
- He is worried about numbers.

Structure:
- Fall and Winter starts. “Good but not ideal”.
- Cohort model is strongest for students. “That is the best scenario for the students.”
- Winter starts jump in with fall starts in classes that run as a “cluster”.
- Some classes can be taken out of sequence, and some cannot.
- Fall starts are better prepared than winter starts. Not that bad just not ideal.
- No clustering in the second year.
- About 75% Fall / 25% Winter starts.
- Winter starts look good to administration, that they are doing it.
- Winter starts help to back fill the students that drop in the first quarter, “…which is key”.
- Would the winter start students have waited till the next fall? Don’t know.
- CAD Design and Drafting is the Core AAS.
- Add a few classes to get the MET AAS.
- Very few students do MET and they will phase it out soon.
- They are being told to reduce credits to 90. (Being fought by some programs.) He thought it was a state directive, but I have never heard of it.

Structure history:
- They used to have a cohort model.
- Then went to three starts a year (because of former VPI) which was very hard.
- Now they are at a good compromise.
- There are currently two instructors. One is about to retire after 40 years.
- Jerry is planning to do a major redesign.

What is he doing to help enrollment?
- They had lots of turn-over in SCC Advising. They didn’t know the program when suggesting programs to new students. He started going to Advising Dept. meetings to do his “dog and pony show”. That was productive.
- He reached out to High School CTE staff. Not very productive.
- Most students are older than high school.
- He is worried about numbers and is trying to come up with something more to do.
Employment:
- More demand than students. Lots of demand in the area.
- Big surge for Civil (They used to have a Civil program but closed it due to low enrollment.)
Appendix G: Information Technology Services Strategic Plan

The ITS (Information Technology Services) Department at LWTech is happy to present the 2022-2026 IT Strategic Plan (ITSP). Each strategic focus area of this plan is designed to support the current approved LWTech Mission Fulfillment Plan and the related goals outline work through 2026. During the academic year of 2022-23, the IT Department will assess whether these goals need to be updated in alignment with accreditation and future Mission Fulfillment Plans. Current projects and initiatives are listed in each focus area and are updated yearly each fall.

The strategies outlined here are intended to guide the department through the college’s Year Seven Mission Fulfillment Evaluation in 2026. As a result, goals related to the new Mission Fulfillment Plan will be approved annually each Fall (with revisions as needed) following analysis by the IT annual departmental planning process. Additional metrics will be completed in the 2022-23 academic year.

ITS Mission Statement
The LWTech IT Department facilitates technology solutions college-wide by providing innovative, efficient, and equitable services and support to the campus community.

ITS Vision
Grounded in equity, innovation, and resilience, the LWTech IT Department seeks to be a fully accessible and approachable IT division for all campus patrons that delivers tools and platforms that provide educational opportunities for students in alignment with the college’s Mission and Goals.

As a strategic partner to all college constituents in delivering services and support, the IT Department will:

- Operate with a customer-service mindset centered in the college values of Inclusive, Innovative, Collaborative, and Respectful
- Strive for transparency of data and information
- Provide timely data and information to departments across campus
- Inform decision-making by increasing reporting efficiencies
- Increase accessibility
- Strive towards digital equity
- Bridge the IT literacy divide through education for digital literacy

ITS Core Values
As an organization focused on technology solutions, the LWTech IT Department’s core values are centered around the following areas:

- Support: Rapid Response and Active Follow-Up (MF 3)
- Advancement and Innovation: Planning; Consulting; Increased Uptime (MF 1, 2, 3)
- Equity and Access: Transparency, Accessibility, and Respect (MF 1, 2, 3)
ITS Areas of Focus (Strategic Goals and Objectives)

Strategic Goal 1: Develop strong partnerships through improved communication and an equity-focused mindset. (MF 1, 2, 3)

Improving communication with an equity lens trickles down to every area of ITS and the college; there is no area more important to providing good support and customer service and continuing the development of partnerships between ITS and their constituents. ITS has identified several initial areas of growth, including increased capacity for and expertise in data and reporting (including digital analytics), providing additional and more inclusive customer training opportunities, continuing to upgrade and manage equipment, hardware, and software, and developing a social media presence to increase interaction with the student population and expand options for IT engagement and learning. All these areas provide opportunities to enhance service to underrepresented groups; for example, as a result of the strategic planning sessions, ITS staff have already sourced multi-lingual translations for student help documents to better serve LWTech’s ELL (English Language Learning) and international student population. ITS staff seek to view these opportunities from multiple frameworks to increase equitable support opportunities.

Current Projects and Initiatives

These initiatives align with ITS Strategic Goal 1 and MFP Goals 2 and 3 by providing support and structure for data and reporting and developing strong foundations for Guided Pathways systems and bringing the college infrastructure up to standard to allow for increased capacity and capability for workforce training leadership. Additionally, creating the multi-lingual help page and videos reduces language barriers rooted in racist structures that disadvantage non-native-English speakers, as well as providing additional options to increase accessibility for users.

- Harden data center, network, and data security
- Upgrade network core
- Upgrade operating systems
- Multilingual help page and videos
- Phone system upgrade
- Wi-Fi enhancements
- Remove and recycle aging PC hardware

Strategic Goal 2: Pursue advancement in core innovation areas. (MF 1, 2, 3)

Between the new hyflex delivery methodologies that the COVID-19 pandemic has ushered in, and the increased reliance on digital curriculum over the last 10 years, innovation and advancement in curriculum delivery is the first core innovation area identified by the ITS staff. As LWTech continues to implement Guided Pathways and aims to be the college of choice for workforce development and economic recovery, continuing to adapt to changing technological requirements and growth will be necessary to position the college at the forefront of technical education.

Core innovation area two is focused on ITS staff development; to support technological innovation and advancement, ITS staff must be constantly seeking out training and learning opportunities to stay abreast of advances in their fields, as well as possible applications to keep LWTech on the cusp of sustainability. This includes capturing organizational process and knowledge through improved onboarding, offboarding, and ongoing in-house training as well to ensure continuity in essential knowledge areas.

Core innovation area three is centered around identifying and pursuing funding opportunities that have the potential to increase capacity in the ITS department to provide equipment or to support...
Appendix G: Information Technology Services Strategic Plan

Strategic Goal 3: Support the stabilization and integration of LionsLink powered by ctcLink to enable college-wide process and project success. (MF 2, 3)

LWTech is firmly in the stabilization phase of the LionsLink powered by ctcLink, and this phase will continue throughout the next four years as the college continues to engage with the system, learn the software, and update organizational processes to adjust for changes in workload and expertise. LionsLink efforts currently focus on access and security, support, and integration, and these areas will shift as the college gains expertise in this new system. LionsLink stabilization also offers an opportunity to move towards digital equity for students and staff, while presenting challenges related to accessibility that will require ongoing advocacy and support.

Current Projects and Initiatives

- Complete ctcLink integration (through 2023)
- Supplemental systems integration
Metrics for Assessment
Initial assessment metrics have been established through collaboration with the Director of Research and Grants and members of the Institutional Planning and Effectiveness Committee. Metrics will be added or refined in future ITS department planning sessions.

Goal 1: Develop strong partnerships through improved communication and an equity-focused mindset.
- Assessed through helpdesk ticket issues over time as proxies for communication, connections, and solutions.

Goal 2: Pursue advancement in core innovation areas.
- Assessed through student surveys on remote learning as proxy for innovation in curriculum delivery.
- Assessed by professional development opportunities tracking as proxy for IT Training.
- Assessed by number of grant proposals submitted with line-item budget for IT.

Goal 3: Support the stabilization and integration of LionsLink powered by ctcLink to enable college-wide process and project success.
- Assessed using the Employee Survey results as proxy for project stabilization and integration.
- Assessed using helpdesk tickets for ctcLink questions and issues.
Overview
The Lake Washington Institute of Technology Information Technology (IT) Update and Replacement Plan has been designed to address the ongoing needs of the college’s constituents for stable, functional, and up-to-date technology that enables them to fulfill the college’s mission to prepare students for today’s careers and tomorrow’s opportunities. With a focus on equity, sustainability, and innovation, the LWTech Information Technology Services (ITS) Department has designed and implemented this plan while simultaneously responding to the changing needs of the college throughout the COVID-19 pandemic. The technology update and replacements plan is informed and guided by the ITS Strategic Plan and annual departmental planning process.

Replacement Lifecycle Process
Replacement of end-point hardware is scheduled on a rotating five-year cycle to maintain security, viability of operating systems, and course application support, as well as maintaining an environment reflective of a technical college to support student work and development. This cycle covers the following types of hardware: student desktop computers, student laptops, classroom instructor stations, and faculty and staff laptop computers. ITS manages the replacement cycle and process, informed by their audit process and hardware management system which covers each department and works in partnership with department needs to consider the age and capacity of equipment. Based on the functionality rating, 20% of equipment is replaced each year, which results in a complete replacement cycle every five years. The five-year cycle meets or exceeds the Washington State Technology Policies and Standards. Funding for the equipment replaced in the cycle comes from dedicated student fees which were approved by the Board of Trustees on April 11, 2022.

Approval Process
Departmental technology needs are documented through the annual department planning process. The departmental analysis includes end-point hardware and software and additional media and technology devices, as well as specific demands for hyflex classroom environments and departmental decision-making on equipment capacity and function. Once the annual departmental planning is complete, ITS partners with departments to ensure that equipment meets the specifications identified in the planning process, as well as adding machine capacity if deemed appropriate to provide for additional demands from high-end future users and software so that problems do not arise based on resource strengths.

In addition, ITS department planning includes college-wide strategic infrastructure needs analysis. The IT Strategic Plan utilizes assessments such as helpdesk ticket analysis and surveys, system age, performance, and reliability, security requirements, student enrollment numbers per program to adjust
focus on similarly aged equipment, and the Replacement Plan cycle to determine priorities for replacements and upgrades.

The CIO brings a summary of equipment upgrades and replacements to Executive Cabinet to update college leadership on department priorities and plans on a quarterly basis. Once acquired, equipment is tagged and added to the hardware management system database before deployment. The approved budget allows for the flexibility to adjust spending priorities due to emerging needs (such as purchasing additional laptops for students during the early days of the pandemic and deploying remote working software to assist in telework options for faculty and staff).

**Procurement**

Technology procurement over the last two years was incredibly impacted by the pandemic. After an initial outlay that focused on providing laptops and access devices for students and faculty to ensure ongoing learning in the new e-learning environment, the college shifted to upgrade major back-end infrastructure. This choice was strategic; as COVID continued to impact learning environments, the college upgraded their network and data center, increased email security, and took the opportunity to retrofit classrooms for hybrid teaching and learning. For example, in addition to supporting the loaner laptop programs deployed through Instruction, early in 2020 the IT department purchased, installed, and deployed outdoor Wi-Fi access points to allow students access to the college network from the parking lot. This project helped narrow the “technology gap” for many of our students.

**Recycling Plan**

In coordination with Facilities, once computers, printers, and other electronic equipment have reached end-of-life (beyond useful service life), the drives are pulled for security and the boxes are sent to e-recycle (via One Green Planet). Upon amassing 200 drives, the vendor destroys them and provides a certificate of disposal in accordance with IT data security procedures.

**Staff and Faculty**

Employee computers are standardized to allow for ease of repair and replacement. Each employee receives a laptop and monitors (up to a total of $1500 per person) and departments have the option to upgrade the equipment and/or provide additional technology depending on the needs of the job, which are then charged to departmental budgets.
## Inventory and Replacement Cycle

**Table 1: Types of technology at Lake Washington Institute of Technology and the planned cycles to upgrade or replace inventory**

<table>
<thead>
<tr>
<th>Technology</th>
<th>Count/Size</th>
<th>Cycle</th>
<th>Annual Replacement Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student desktop computers</td>
<td>962</td>
<td>5 years</td>
<td>Upgraded as per planned replacements schedule.</td>
</tr>
<tr>
<td>Student laptops</td>
<td>300</td>
<td>5 years</td>
<td>Upgraded as per planned replacements schedule.</td>
</tr>
<tr>
<td>Classroom instructor stations</td>
<td>75</td>
<td>5 years</td>
<td>Upgraded as per planned replacements schedule.</td>
</tr>
<tr>
<td>Faculty and staff desktop computers</td>
<td>360</td>
<td>5 years</td>
<td>As needed per software upgrades, professional development, curricular needs, and per the replacement planning cycle.</td>
</tr>
<tr>
<td>Faculty and staff laptop computers</td>
<td>200</td>
<td>5 years</td>
<td>Upgraded per software upgrades, professional development, and curricular needs, and per the replacement planning cycle.</td>
</tr>
<tr>
<td>Networked printers</td>
<td>150</td>
<td>7-10 years</td>
<td>Security flaws or fault in equipment.</td>
</tr>
<tr>
<td>Servers – Physical/Virtual</td>
<td>12 physical servers; Nutanix infrastructure: 11 blades</td>
<td>6-8 years</td>
<td>Dependent on performance and viability; ongoing server replacement over the last five years.</td>
</tr>
<tr>
<td>Network storage</td>
<td>24 TB (Nutanix infrastructure)</td>
<td></td>
<td>Based on replacement of Nutanix blades; dependent on performance and reliability.</td>
</tr>
<tr>
<td>Network Routers</td>
<td>8 routers</td>
<td>7-10 years</td>
<td>Dependent on performance and reliability</td>
</tr>
<tr>
<td>Network switches</td>
<td>12 switches</td>
<td>7-10 years</td>
<td>Dependent on performance and reliability</td>
</tr>
<tr>
<td>Firewalls</td>
<td>1 firewall</td>
<td>5-7 years</td>
<td>Firewall due for replacement by 2025</td>
</tr>
<tr>
<td>Network appliances</td>
<td>2 NetScaler apps</td>
<td>As needed</td>
<td>Dependent on performance and reliability</td>
</tr>
<tr>
<td>Wireless access points</td>
<td>130 wireless APs</td>
<td>3-5 years</td>
<td>Wireless APs replaced/upgraded 2021</td>
</tr>
<tr>
<td>Telephones</td>
<td>525</td>
<td>As needed</td>
<td>All college phones replaced 2022</td>
</tr>
<tr>
<td>Technology-enhanced classrooms/rooms (projectors, computer, DVD/VHS player, media switch, screen)</td>
<td>58</td>
<td>8-10 years</td>
<td>Hyflex classrooms have been evaluated and are already implemented. Classroom needs for hyflex are evaluated annually and installed or upgraded as needed.</td>
</tr>
<tr>
<td>Fiber and telephone/data wiring plant</td>
<td>1 fiber, 1 data</td>
<td>Maintenance as needed; 25 years</td>
<td>Upgraded telephone, data, and fiber in 2011.</td>
</tr>
</tbody>
</table>
Appendix H: Information Technology Update and Replacement Plan

Replacement Summary
Since the college’s comprehensive Year Seven review, work has been ongoing to upgrade server and network infrastructure to bring the college’s IT systems up to date and provide the foundation for sustainable improvements that incorporate IT strategic plan priorities and the technology replacement cycle. As the COVID-19 crisis developed, the IT department pivoted to support remote learning while continuing to deploy software and hardware that supported the hyflex learning and working environments while also preparing for future needs. IT leadership was particularly innovative during the early days of the pandemic, identifying technology needs and opportunities often just in advance of supply shortages. Now that technology demands are stabilizing, future purchasing will reflect the planning cycle in more predictable ways.

2019-2022 Infrastructure Upgrades

2019
- Nutanix - added three blades
- Added 40+/- network drops (ongoing through 2022)

2020
- Nutanix – added two blades
- Added Remote Phone capability to Cisco Phone system for 150 lines
- Replaced Data Center 2 routers and Access Switch
- Added Citrix NetScalers to Network infrastructure
- Replaced Door Controller Server

2021
- Nutanix – added two blades and replaced Network Shares Files storage onto Nutanix server
- Replaced four remaining Network Routers
- Implemented Barracuda email security suite
- Installed hyflex room upgrades

2022
- Nutanix – added four blades for backup infrastructure
- Replaced 18 network access switches and added a new network core to the Allied Health building, enhancing network security and reliability
- Reconfigured the network core to a full mesh topology from a dual Ring topology
- Replaced aging Cisco Phone system with a new Hosted platform which provides better reliability and remote capability for all extensions
- Continued installing Hyflex room upgrades
Appendix H: Information Technology Update and Replacement Plan

2019-2022 Computer Upgrades

2019
- Purchased 200 laptops for student and faculty use
- Replaced 30 computers for faculty and staff

2020
- Purchased 125 Samsung tablets for student use
- Purchased 45 laptops for staff and faculty
- Purchased monitors for staff/faculty to use at home
- Purchased laptop docks for staff/faculty use
- Replaced 15 computers for faculty and staff

2021
- Purchased monitors for staff/faculty to use at home
- Purchased laptop docks for staff/faculty use
- Purchased 45 laptops for staff and faculty use

2022
- Purchased monitors for staff/faculty to use at home
- Replaced 32 (of 44) classroom faculty workstation computers
- Replaced 15 computers for faculty use

Improvement Planning
The following actions are built into the IT Strategic Plan and will support the college’s efforts to ensure adequacy of the college’s technology infrastructure and to prepare for the continued hyflex delivery of instructional programs.

1. Continue to implement the technology update and replacement plan.
2. Finalize and implement the IT Strategic Plan.
3. Continue to enhance learning spaces with hyflex and remote learning technologies.
4. Develop assessment methodologies to measure equity of access, equipment, and support to all students and employees and to amend areas of improvement.
5. Implement fully realized funding streams and integrate funding data into future strategic planning.
Executive Cabinet Department Level Planning and Assessment

**Mission:** To prepare students for today's careers and tomorrow's opportunities

**Vision:** To be the college of choice for workforce education

**Core Values:**

- **Inclusive:** We intentionally create a welcoming environment where all feel a sense of belonging.
- **Innovative:** We are leaders in maximizing opportunities to create a thriving college community.
- **Collaborative:** We are open to change and work together to achieve success for all.
- **Respectful:** We engage others with acceptance, open-mindedness, courtesy, and care.

**Core Themes:**

- **Pathways:** LWTech is accessible to the community by providing multiple entrance points and educational pathways. The college is a conduit for students to upgrade their skills, transition into new careers, or further their education and training.
- **Student Achievement:** At LWTech, students gain the skills and knowledge needed to achieve their educational goals and to participate in the workforce.
- **External Engagement:** LWTech forms partnerships with governmental and community organizations, educational institutions, business, and labor in order to effectively support the Institution’s mission.
- **College Community:** LWTech provides a safe, supported and engaging learning environment for students and work environment for faculty and staff.

**Mission Fulfillment Planning Goals:**

- **Goal 1:** Continue Addressing and Dismantling Structural Racism.
- **Goal 2:** Continue Implementing Guided Pathways.
- **Goal 3:** Position LWTech as the integral leader in workforce retraining as Washington State prepares for short and long-term economic recovery.
Executive Cabinet Department Level Planning and Assessment – Part 1

Part one of the planning and assessment process is generally completed in the Fall and Summer quarters at the college.

Department: Click or tap here to enter the name of the department.

Executive Cabinet Representative: Choose the appropriate name.

Timeline: This assessment is for the Choose an academic year. Academic Year.

Reviewed by Executive Cabinet: Click or tap to enter a date.

Department Guiding Principles: This department has determined the following guiding principles (sometimes called department objectives or a department level mission) best describe its alignment with the college mission, vision, values, and core themes:

- Click or tap here to enter text.

Analysis (SWOT or other method): On Click or tap to enter a date. the department used the Click or tap here to enter “SWOT” or name of other method used. method of analysis to determine the following:

- Strengths: Click or tap here to enter a brief description of the strengths of the department.
- Weaknesses: Click or tap here to enter a brief description of the weaknesses of the department.
- Opportunities: Click or tap here to enter a brief description of the opportunities for the department.
- Threats: Click or tap here to enter a brief description of the threats faced by the department.

Operational Plan (who, what, when, data): Based on the analysis above, the department selected the following goals for the year:

<table>
<thead>
<tr>
<th>Department Goal</th>
<th>Implementation Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click or tap here to list your first goal.</td>
<td>• Describe the connection to the mission, vision, core values, core themes, and/or mission fulfillment goals: Click or tap here to enter text.</td>
</tr>
<tr>
<td></td>
<td>• Who is leading this work? Click or tap here to enter text.</td>
</tr>
<tr>
<td></td>
<td>• What actions steps are involved? Click or tap here to enter text.</td>
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<tr>
<td></td>
<td>• When will the work be done? Click or tap here to enter text.</td>
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<tr>
<td></td>
<td>• What data will demonstrate success? Click or tap here to enter text.</td>
</tr>
<tr>
<td>Click or tap here to list your next goal (leave blank if not applicable).</td>
<td>• Describe the connection to the mission, vision, core values, core themes, and/or mission fulfillment goals: Click or tap here to enter text.</td>
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<td>What data will demonstrate success? Click or tap here to enter text.</td>
<td></td>
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</tbody>
</table>

Click or tap here to list your next goal (leave blank if not applicable).

| Describe the connection to the mission, vision, core values, core themes, and/or mission fulfillment goals: Click or tap here to enter text. |
| Who is leading this work? Click or tap here to enter text. |
| What actions steps are involved? Click or tap here to enter text. |
| When will the work be done? Click or tap here to enter text. |
| What data will demonstrate success? Click or tap here to enter text. |

Click or tap here to list your next goal (leave blank if not applicable).

| Describe the connection to the mission, vision, core values, core themes, and/or mission fulfillment goals: Click or tap here to enter text. |
| Who is leading this work? Click or tap here to enter text. |
| What actions steps are involved? Click or tap here to enter text. |
| When will the work be done? Click or tap here to enter text. |
| What data will demonstrate success? Click or tap here to enter text. |
Executive Cabinet Department Level Planning and Assessment – Part 2

Part two of the planning and assessment process is generally completed in the Winter and Spring quarters at the college.

*Share with IPEC: Based on the timeline for department level review, this will be (or was) reviewed by IPEC on [Click or tap to enter a date].*

*Track Progress: Throughout the [Choose an academic year. Academic Year] the following progress was made:*

<table>
<thead>
<tr>
<th>Department Goal</th>
<th>Short Description of Work Accomplished to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click or tap here to list your first goal.</td>
<td>Click or tap here to enter text.</td>
</tr>
<tr>
<td>Click or tap here to list your next goal (leave blank if not applicable).</td>
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<tr>
<td>Click or tap here to list your next goal (leave blank if not applicable).</td>
<td>Click or tap here to enter text.</td>
</tr>
</tbody>
</table>

*Assessment: Throughout the [Choose an academic year. Academic Year] assessment was integral and ongoing:*

<table>
<thead>
<tr>
<th>Department Goal</th>
<th>Short Description of What the Data Says About the Impact of the Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click or tap here to list your first goal.</td>
<td>Click or tap here to enter text.</td>
</tr>
<tr>
<td>Click or tap here to list your next goal (leave blank if not applicable).</td>
<td>Click or tap here to enter text.</td>
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</tr>
<tr>
<td>Click or tap here to list your next goal (leave blank if not applicable).</td>
<td>Click or tap here to enter text.</td>
</tr>
</tbody>
</table>
Budget & Facilities Requests: Based on the data or the analysis, the following budget and facilities requests were submitted:

- List budget requests and outcomes of those requests.
  - Click or tap here to enter text.
- List facilities requests and outcomes of those requests
  - Click or tap here to enter text.
- List other decisions made that did not require budget or facilities requests (e.g. department reorganizations, discontinuation of services, application to specific grant funding, etc.)
  - Click or tap here to enter text.

Additional Information:

- Describe improvements to student learning and/or achievement:
  - Click or tap here to enter text.
- Describe how you ensured inclusion during the planning process (list who was involved):
  - Click or tap here to enter text.
- Describe how your planning assists the college with mission fulfillment:
  - Click or tap here to enter text.
Appendix A: Accreditation Considerations

Accreditation recommendation in Fall 2019:


Cross walk from old standards to new standards

<table>
<thead>
<tr>
<th>New Standards</th>
<th>Old Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.B.1 The institution demonstrates a continuous process to assess institutional effectiveness, including student learning and achievement and support services. The institution uses an ongoing and systematic evaluation and planning process to inform and refine its effectiveness, assign resources, and improve student learning and achievement.</td>
<td>4.A; 4.B; 5.A</td>
</tr>
<tr>
<td>1.B.3 The institution provides evidence that its planning process is inclusive and offer opportunities for comment by appropriate constituencies, allocates necessary resources, and leads to improvement of institutional effectiveness.</td>
<td>Related to planning &amp; assessment</td>
</tr>
<tr>
<td>1.D.3 The institution’s disaggregated indicators of student achievement should be widely available on the institution’s website. Such disaggregated indicators should be aligned with meaningful, institutionally identified indicators benchmarked against indicators for peer institutions at the regional and national levels and be used to continuous improvement to inform planning, decision making, and allocation of resources</td>
<td>4.B.1</td>
</tr>
<tr>
<td>1.D.4 The institution’s processes and methodologies for collecting and analyzing indicators of student achievement are transparent and are used to inform and implement strategies and allocate resources to mitigate perceived gaps in achievement and equity.</td>
<td>4.A; 4.B.2</td>
</tr>
</tbody>
</table>
Appendix B: Visual Model of the Continual Institutional Effectiveness Process

Mission → Vision → Core Values → Core Themes → Department Planning and Assessment that leads back to the mission fulfillment plan